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OF THE

# ASSEMBLY

OF THE

## STATE OF NEW YORK

## ONE HUNDRED AND FORTY-FIRST SESSION

## 1918

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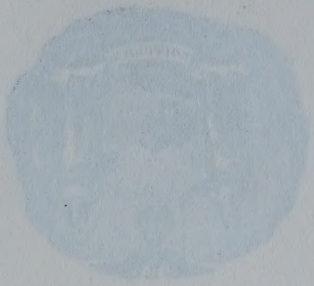

# Twenty-Third Annual Report of the American Scenic and Historic Preservation Society, 1918

TO THE LEGISLATURE OF
THE STATE OF NEW YORK

TRANSMITTED TO THE
LEGISLATURE APRIL 12,
1918

FOUNDED BY ANDREW H. GREEN AND
INCORPORATED BY THE LEGISLATURE
OF THE STATE OF NEW YORK, 1895

Headquarters: No. 154 Nassau Street, New York, N. Y.

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# STATE OF NEW YORK

No. 62

# IN ASSEMBLY

APRIL 12, 1918.

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## TWENTY-THIRD ANNUAL REPORT

OF THE

## AMERICAN SCENIC AND HISTORIC PRESERVATION SOCIETY

---

NEW YORK, *April* 12, 1918.

Hon. THADDEUS C. SWEET, *Speaker of the Assembly, Albany, N. Y.:*

SIR.— I have the honor to transmit herewith to the Legislature of the State of New York the Twenty-third Annual Report of the American Scenic and Historic Preservation Society as required by law.

Yours respectfully,

GEORGE FREDERICK KUNZ,
*President.*

EDWARD HAGAMAN HALL,
*Secretary.*

# TWENTY-THIRD ANNUAL REPORT

OF THE

# AMERICAN SCENIC AND HISTORIC PRESERVATION SOCIETY

---

## THE EUROPEAN WAR

NEW YORK, *April* 12, 1918.

*To the Legislature of the State of New York:*

Pursuant to chapter 166 of the Laws of 1895 and laws amendatory thereof and supplementary thereto, the Trustees of the American Scenic and Historic Preservation Society have the honor to present this, its Twenty-third Annual Report.

We feel that it would be unbecoming not to speak at the very beginning of this report, and before taking up routine matters, of the dominating thought of the American people at this time, namely, the European War. During the past year this has been the one supreme controlling fact of the nation.

During the first quarter of the year 1917 when our last annual report was being written, the European War was to the majority of our people an affair from three to six thousand miles away. It is true that at that time and earlier, thoughtful men apprehended what was coming. The sinking of the Lusitania and other crimes on the high seas could have but one meaning. They meant that traditional friendship and respect for the laws of civilized nations would not prevent Germany and her allies from attacking the United States if such attack would serve the ends of the Central Powers. One did not have to be in the confidence of the Federal Government to know of and interpret the hostile propaganda being conducted in this country; the incitements to crime; the burning and destruction of our industrial plants; the

stealthy entrance of our waters by German submarines,* and many other indications of approaching trouble. And it cannot be doubted that those who were in the confidence of the Government knew much more to the same effect than the general public. It is true, too, that the utterances of some of our most forward-looking citizens called to the Government to make preparations for the storm that was gathering.† But the great mass of our people saw nothing of preparation. The war did not touch them. They still viewed it as a dream being enacted on a distant stage.

The announcement by President Wilson on February 3, 1917, that he had recalled the United States Ambassador to the Imperial German Government and had directed that the German Ambassador to the United States be given his passports sounded a distinct alarm of an approaching crisis. This was followed two months later by the adoption by Congress of the following declaration of a state of war, which President Wilson signed April 6, 1917:

Public Resolution No. 1, Sixty-fifth Congress (S. J. Res. 11), Sixty-fifth Congress of the United States of America, at the first session, begun and held at the City of Washington on Monday, the second day of April, 1917.

Joint resolution declaring that a state of war exists between the Imperial German Government and the Government and the people of the United States and making provision to prosecute the same.

Whereas, The Imperial German Government has committed repeated acts of war against the Government and the people of the United States of America: Therefore be it

* The question may well be asked why our government should allow the submarine of any foreign nation to enter our territorial waters submerged unless it is the submarine of an allied nation in time of war. When one friend enters the house or place of business of another, he does not go in stealthily by the cellar, but openly and above ground; and the commander of no submarine entering our waters on friendly errand would object to making his presence known and crossing our national sea border in the open. The submarine is essentially an engine of stealth and should be treated accordingly.

† Witness the great Preparedness Parade in New York on May 13, 1916, nearly a year before the declaration of War. (See page 204 of our last Annual Report.) Also Mayor Mitchel's speech on July 4, 1916. (See page 215 of our last Annual Report.) And many other instances which might be cited. It is not our purpose to comment on the lack of heed paid to these warnings.

*Resolved,* By the Senate and House of Representatives of the United States of America in Congress assembled. That the state of war between the United States and the Imperial German Government which has thus been thrust upon the United States is hereby formally declared; and that the President be, and he is hereby, authorized and directed to employ the entire naval and military forces of the United States and the resources of the Government to carry on war against the Imperial German Government; and to bring the conflict to a successful termination all of the resources of the country are hereby pledged by the Congress of the United States.

CHAMP CLARK,
Speaker of the House of Representatives.

THOS. R. MARSHALL,
Vice-President of the United States and President of the Senate.

Approved, April 6, 1917, WOODROW WILSON.

The fears of the few were then realized. The nation was then at war. And since then this terrible fact has been sinking deeper and deeper into the consciousness and life of the people, and there is not now a single human activity that is not touched by it somehow.

It is fortunate for the United States, perhaps, that this catastrophe has not come upon it from out of a clear sky, for it has permitted the people to adjust themselves to the new situation, somewhat hurriedly, to be sure, but yet gradually. The evidences of the state of war appeared from time to time in various forms of different degrees of importance. The great political and military events of the war will be duly recorded in the voluminous histories which will inevitably be written; but it may not be inappropriate to mention here some of the minor occurrences which give the "human touch" and which may be forgotten by the historian who writes a few years hence.

The loyal sentiment of the people first found expression in a profuse display of American flags. As time went on, many flags of our allied nations were interspersed among them; and in September, 1917, appeared the "service flags," described more fully in another part of this report.

Men and women also began to wear little knots of red, white and blue ribbon, or small flags, or patriotic badges of various kinds. Many of the war activities were signalized by some sort of badge or celluloid button. When a person purchased a Liberty Bond he received a button. If he signed the food conservation pledge he received a different kind of button. If he joined the Red Cross, he was entitled to wear the distinctive badge of that organization. And so on.

The grim reality of the war was appreciated when, on May 18, 1917, President Wilson signed the selective draft bill. The registration of about 10,000,000 young men of military age under this act took place on June 5, and on July 20, at Washington, occurred the drawing of numbers to determine the order in which the men were to be called to the colors. The latter date was one of intense interest and suppressed excitement. The newspapers of that evening and the next morning, containing the numbers drawn in this great national lottery, were eagerly purchased and closely scanned. In many cases women were prostrated by the intensity of the strain.

Following this came the actual selection of about 600,000 men for the first contingent of the new army; the calling of the men selected to the colors; their movement to the training camps; and at length their secret embarkation and transportation to France.

On June 13, 1917, Gen. Pershing and staff arrived in Paris in advance of his troops; on June 26, the first division of American troops arrived in France; on July 27, the second contingent of American troops arrived on the other side; and since then the movement of men to the scene of war has continued until 366,482 men had sailed prior to April 1, 1918. The transportation of troops was effected with singular success and immunity from disaster until the Tuscania was sunk off the north coast of Ireland on February 5, 1918, with the loss of 166 lives.

Upon their arrival in France, the American troops were trained further, and gradually sent to the front, between St. Mihiel and Alsace, and on October 27, 1917, it was formally announced that the American troops had fired their first shot in trench warfare, the American artilleryman using a French 75-centimeter gun. The shell case was preserved to be sent to President Wilson. On

November 3, 1917, a small detachment of American troops in front line trenches was attacked by a superior force of Germans and lost 3 killed, 5 wounded and 10 prisoners. The killed were Corporal James B. Gresham of Evansville, Ind.; Private Thomas F. Enright of Pittsburgh, Penn.; and Private Merle D. Hay of Glidden, Iowa. (See "American Soldiers' Graves in Foreign Soil" in another part of this Report.) Over their graves was laid a wreath with this inscription:

> "Here lie the first soldiers of the great Republic of the United States who died on the soil of France for Justice and Liberty. Nov. 3, 1917."

Since that date, the American troops have taken an increasingly active part at the front.* Although up to the present writing they have participated in no great battle, yet they have suffered numerous casualties at the front and sustained losses from natural causes in the camps, so that beginning in November, 1917, casualty lists have regularly been made public by the War Department, thus bringing home to the American people a deeper realization of the state of war. Concerning the identification and burial of the heroic dead, we shall have more to say in another part of this Report.

While these events have been occurring abroad, the outward signs of the war have multiplied at home. Soon after the draft began, men in uniforms began to appear in public, first in small numbers, then in twos and threes, then in groups. At first, they were conspicuous by contrast with civilians and their conspicuousness emphasized the unmilitant condition of the United States in normal circumstances, when the military power is habitually small and out of sight. The uniformed men became more numerous, on the streets, in the public conveyances, in the theatres and in the churches, so that now they do not attract unusual attention unless, as on September 4, 1917, when the first New York quota marched down Fifth avenue, they appear in large bodies. A feature of this manifestation of the war condition has been the appearance on the streets of New York City of many uniformed sailors and soldiers of allied countries.

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* See qualification of this statement under the heading "In France."

Other spectacular and stirring events were the visits of the War Commissions of the allied countries to New York City, as described elsewhere in this Report, and various street parades for the encouragement of war work. One of the most notable of the latter was the parade of Red Cross nurses down Fifth avenue, New York City, on October 4, 1917.

Immediately on the declaration of war in April, 1917, the recruiting of the army and navy by calls for voluntary enlistments began. This recruiting work continued actively through the remainder of the year. Posters were put up in public places, appealing to men to enlist for the defense of their country, civilization and democracy; and tents were set up in City Hall Park, New York, and other public places where enlisting took place. Motor trucks, automobiles and the stages of the Fifth Avenue Omnibus Line were also used in this work. Decorated with the national colors and patriotic placards, they would move from place to place, and when they halted the speakers — sometimes men, sometimes women, and occasionally soldiers and sailors already in the service — would make short, snappy appeals for recruits. Oftentimes bands of music accompanied these recruiting parties. In January, 1918, a unique attraction which appeared at midday in front of the New York City Hall for several days was a calliope operated by compressed air supplied by a submarine motor, which rendered popular music. The most notable recruiting station erected was that in the shape of a battle-ship about 200 feet long, which was built in Union Square, New York City, and which still stands there.

While these military movements were taking place there was little outward evidence of the intense activity in certain branches of industry devoted to the manufacture of war material and equipments; but there were public indications of precautions of an unusual nature which it may be of future interest to mention here.

One extraordinary sight has been that of the military patrols at bridge and canal locks, along the water-front of New York, along the Catskill and Croton aqueduct system, around certain manufacturing plants, and along certain highways. The patrolling of railroads, the guarding of bridges, and similar precautions

within the war-zone were not unusual during the Civil war, but never, so far as we know, have some of these precautionary measures been taken before in this country outside of the war-territory itself. For instance, it was a new experience for persons riding along a certain elevated highway in the mountains in the Palisades Interstate Park, overlooking Iona Island, to be stopped by a military patrol and searched for firearms and cameras. Persons accustomed freely to use cameras in the parks of New York or along the picturesque water-front found themselves suddenly interrupted by the police or military patrol because they were near some water-supply reservoir or were in sight of shipping in the river and harbor. When the Secretary of this Society started to cross the Erie railroad viaduct over the Genesee river at Portage, N. Y., to enter Letchworth Park, which is in the custody of this Society, he was surprised to be stopped by a sentinel, although allowed to pass later upon permission of the commanding officer. Our Secretary has been able to take pictures for this Report and the last Report only by the grace of various United States military authorities, park, police, aqueduct, and other officials who granted the necessary permits.

During 1917, the United States Government floated two great loans knows as Liberty bonds. The sale of these bonds was promoted in many popular ways. The bonds were not only sold by banking houses, but also at booths erected along the public streets, and subscriptions were received at any place where large numbers of people passed or congregated. To promote interest in these loans, a British " tank " rolled its strange and ungainly form through the streets of New York and other cities; and in the latter part of October and the early part of November, a captured German submarine was exhibited in Central Park, New York, for the same purpose. Great dials on the tall buildings of New York recorded the progress of the sales and were watched with great interest by the passing throngs.

When, in January, 1918, the American Red Cross organization made a concerted " drive " for members, the solicitation from booths was carrid out on a more elaborate scale than anything that had been done before. Booths were made of pulp board in the form of a three-leaved folding screen, suitably ornamented and

lettered and set up — mostly indoors — in every conceivable place where there was a prospect of getting new members; and in many more places, the representatives of the Red Cross, in white dresses and head-dress, sat at small tables in the restaurants, hallways of office buildings, large stores, etc., inviting every passerby to join the Red Cross. One could not enter his place of business, go into a restaurant for luncheon, enter a theatre lobby, go to his bank to make a deposit or to a department store to make a small purchase without meeting the solicitations of these winsome agents of a winning cause.

At intervals, during the summer and fall of 1917, similar "drives" were made for various relief movements, Belgian, Serbian, Armenian, etc., etc. On these occasions young men and women, sometimes wearing sashes or other distinguishing marks, thronged the streets and public places with contribution boxes and invited donations for the good causes which they represented. Members of families of all stations, high and low, took part in these campaigns.

The posters, placards and billboards erected to promote these and other patriotic movements were a feature in themselves. Many of the posters were artistic and powerfully appealing. It is to be hoped that the New York Public Library or some other great institution has made a collection of them, for they mark an epoch in the history of poster art. But the erection of these posters, artistic and patriotic in themselves, has violated some of the established conventions of civic propriety in New York City at least. In October, 1917, the appearance of placards on some of the public monuments and statues of the City aroused much criticism. The affixing of posters to works of art, simply to attract attention by their startling and unusual situation, was considered by many persons with good judgment as a violation of good taste and as entirely unnecessary. Fortunately, this kind of manifestation of undiscriminating zeal has not been extensive. Another violation of civic proprieties, which has been tolerated in the present circumstances, has been the erection of billboards in public parks. One of the most conspicuous of these has been erected in City Hall Park between the City Hall and Broadway. It is a steel frame structure about 25 feet long and 25 feet high and has

been used to advertise the Liberty loans, to encourage food conservation, etc. The amount of advertising accomplished by these park bill-boards is so small, compared with the advertising of the same subjects by means of newspapers, restaurant bills-of-fare, and other mediums, and the effect of these precedents for bill-boards in public parks may be so far-reaching and unfortunate, that it is a question whether more is not lost than gained by them in the long run.

Another interesting outward manifestation of the war-state has been the popular movement among the women of the country for knitting socks, mittens, wristlets, mufflers, helmets and sweaters for the "boys over there." * This knitting has not been performed solely in the privacy of domestic life, but has been conducted in many unusual public places. During the last half of 1917 and up to the present writing women have been industriously knitting when traveling on the steam cars and the street cars, at lectures, in the theatres, and even when at work when their occupation, like that of some telephone operators, has permitted it.

In the west and northwest, many other old time customs have been revived, particularly in the rural communities. A traveling salesman, whose observations upon this subject were given in the New York *Times* of February 11, 1918, reports that in Wisconsin,

* The expression "over there," meaning in the war-zone, has become proverbial. Its use has been fostered by one of the popular songs of the day which runs as follows:

Johnnie get your gun, get your gun, get your gun.
Take it on the run, on the run, on the run,
Here them calling you and me,
Ev'ry son of Liberty.
Hurry right away, no delay, go to-day,
Make your daddy glad to have had such a lad,
Tell your sweetheart not to pine,
To be proud of her boy in line.

Over there, over there
Send the word, send the word over there
That the Yanks are coming, the Yanks are coming,
The drums rum-tumming ev'rywhere.
So prepare. Say a prayer.
Send the word, send the word to beware.
We'll be over, we're coming over,
And we won't come back till it's over, over there.

Minnesota, North Dakota, South Dakota and Wyoming there are thousands of old women who came from countries where in their youth the spinning wheel and home hand-loom were essentials in the domestic economy of every household. The farms in much of that region raise both flax and wool, and since linens, cottons and all woolens have gone to almost prohibitory prices and are hard to get at any price in many rural communities, these women have turned to the spinning-wheel, the hand-loom and knitting needles to supply home demands. In farm community social centers and granges these older women are teaching their long-unpracticed art to the younger generations, and spinning, carding and knitting bees are displacing the sewing and Dorcas societies.

As an illustration of the demand for knitting, spinning and weaving machines may be cited the experience of a hardware dealer of Lacrosse, Wis., who, during the late fall of 1917 and early winter sold more than 100 spinning wheels in his territory and half as many knitting machines. The manufacture of spinning wheels has been taken up by several furniture factories and they are plentiful, but owing to the demand growing out of the Red Cross and other agencies that are encouraging knitting for soldiers and sailors, knitting machines are not to easy to get. A very simple machine that sells for $20, and for $25 with attachments to broaden its usefulness, does remarkably fine and rapid work. It will turn out a pair of ribbed woollen socks, heels and toes fashioned, in a few minutes. It has attachments for using heavy, medium and light woollen yarns, and others for three weights of spun flax. With a splitting and sewing device it can be made to knit not only stockings, but sweaters, underwear, caps and mittens.

It is not unusual in some of the country towns to see home-spun and home-woven cloth offered for sale. Some very fine flax bed coverings have been turned out and not a little linen cloth for women's wear that would rival the specimens one sees in museums of the clothing of American revolutionary days has been made. Throughout the northwest the farms are becoming more and more self-reliant. A mill that sells for about $3 has been introduced that will grind a bushel and a half of wheat, rye or barley in an hour, ready for bread-making. Farmers who used to buy their

meats and canned goods in town are curing their own pork, beef and mutton. And during the summer of 1917 few failed to can enough for the year's needs.

Another feature of old-time rural life that has returned to some extent is the peregrinating cobbler. With shoes and leather at almost prohibitive prices many farmers have found it economical to have a shoe-mender put all the family shoes in order occasionally.

An effect of the war on domestic life, less obvious publicly than some others but intimately disturbing the household arrangements of thousands of families, has been produced by the inability of housekeepers to hire domestic help. This difficulty has been due, first, to the complete cessation of immigration, and second, to the attraction of large wages offered in other occupations. The war industries have made unusual demands for help in industries for which women and girls have shown unusual aptitude; and the withdrawal of hundreds of thousands of men from industrial and commercial occupations for the army has compelled the engagement of women in their places in many cases. The result of this scarcity of domestic help has been that many families, unable to hire servants, have closed their houses and moved into hotels or boarding houses; while thousands of others are now performing their own housework.

It is also interesting to those who remember the period of the Civil War to note the contrast between the manner, but not the spirit, of the women's participation in the two periods. This is notably the case with the preparation of surgical dressings for the wounded soldiers. In the days of 1861–65, the women, in their homes and their Martha Washington Societies, and other relief organizations "picked lint" and made bandages, etc.; but there is no "picking lint" now. Today, with the advance in the science of antiseptic surgery, and with the systematized work of the great American Red Cross, sterilized bandages and dressings are prepared in the most scientific manner and upon a scale unknown to the women of the preceding generation. The voluntary services of the women of the country in aid of the Red Cross has also made a distinct change in their domestic and social routines.

Next to the going away of the soldiers from home, one of the most serious ways in which the war has been brought close to the people's consciousness is in the matter of food. Ever since the war in Europe began in August, 1914, there has been a gradual advance in the cost of food. Sometimes, as in purchases for home consumption, this advance was evident in higher prices charged. Sometimes, as in the business men's restaurants of New York City, it was evident in diminished portions served at an unchanged rate. But it was evident that there was an irreducible minimum beyond which it was inexpedient to go in diminishing the size of portions served, and in the middle of 1917 the restaurants began to raise their rates. In July, 1917, a series of popular New York restaurants which formerly served a cup of coffee, hot rolls and two boiled eggs for twenty cents, raised the price to twenty-five cents. Since then, other articles have gone up proportionately.

In October, the country had the extraordinary experience of a sugar shortage. Nothing of that sort had ever happened in the history of the United States. The restaurants at first requested customers by printed notices to use as little sugar as possible. Inside of a week the restaurants removed the common sugar bowls from the tables and lunch counters and served only fixed portions with meals. When cut loaf sugar was available, two lumps were served with a cup of coffee. When only granulated sugar was available, one or two teaspoonfuls in a small paper envelope was handed to a customer. At one time in January, 1918, some restaurants were serving formless brown sweetening called sugar. At some of the grocery stores, during the latter part of 1917, it was impossible to buy any sugar; and at others not more than a pound at a time could be purchased. This situation existed particularly in the east, and was felt most acutely in New York City. In the west, especially in the sugar-beet region, as in Wyoming, to our particular knowledge, there was sugar in abundance. During the first week in February, 1918, the situation was much relieved.

In the latter months of 1917, the "wheatless" and "meatless" days recommended by the Government began. Placards and billboards urged the people to eat less wheat bread and meat, and to eat more corn products and fish. People were urged by personal solicitation, house to house canvass, public advertisements, restau-

rant and railroad bills-of-fare, and in other ways to pledge themselves to economy. If they signed the pledge, they were given buttons ornamented with a red, white and blue shield to wear and paper flags bearing a similar design to hang in their windows. In February, 1918, a big sign on the front of the United States Sub-treasury at the corner of Nassau and Wall streets, in New York, read:

Eat less
Feel better Look better
Help win the war.

On February 1, 1918, the Food Administration issued rules requiring bakeries to use a certain percentage of substitutes for wheat flour in bread and rolls, and about that time restaurants and hotels were limited to serving only two ounces of bread or rolls to each customer at a single meal. On April 14, 1918, the percentage of substitutes for wheat flour in bread and rolls will be increased to 25 per cent. A substitute content of $33^1/_3$ per cent is to be required hereafter in sweet yeast dough goods, cookies and ice cream cones, cakes, pies, fried cakes and pastry. In batter cakes, waffles, quick breads, such as muffins and Boston brown bread, $66^2/_3$ per cent is to be required and in crackers 15. Under the new rules no public eating place may serve more than two ounces of bread and rolls or more than four ounces of quick bread to any one person at any one meal.

It should be mentioned, for the benefit of those who may consult these pages years hence, that these shortages of food-stuffs and the economies in eating recommended by the Government were not due to any absolute shortage of food crops, but to the necessity of sending food abroad to feed the countries of our allies.

The most acute physical suffering endured by the people at home in consequence of war conditions occurred at the very end of 1917 and in the opening weeks of 1918, due to shortage of coal. And again, this was not due to absolute shortage, but to the tangled state of affairs in the management of railroads due mainly to government regulations and lack of coordination in the work of various government administration. The result of these complications was such an accumulation of undelivered freight at the seaboard that it produced not only a shortage of

empty cars, but also created a freight barricade which prevented the delivery of coal. In the midst of this railroad situation, a cold wave, the coldest ever recorded in New York City since the establishment of the Weather Bureau, occurred. On December 30, 1917, the mercury was 13 degrees below zero in New York City, and during January and early February, 1918, extraordinarily low temperatures prevailed. In January the mercury touched 5 degrees below zero in New York City and on February 5 it was 7 degrees below. Not only did the mercury on three occasions between December 1, 1917, and February 6, 1918, go lower than ever before recorded in the history of the Weather Bureau, but the general temperature for every hour of every day of that period was lower than ever before recorded.* The river and harbor at New York were blocked with ice so that at one time, when there was an abundance of coal at tidewater in New Jersey, there was very little in New York City. With the shortage of coal and the intense cold, there was an enormous demand at the stores for electric heaters, oil stoves, kerosene cans, and kerosene oil. It was impossible at times in January, 1918, to buy these things, the demand having exhausted the supplies. The experience of some dealers in kerosene, for instance, were most trying. After their supply of oil had been exhausted, they had to turn away men and women, in many cases begging for enough oil to "keep the baby warm" or for the comfort of some sick person. One day the subway trains had to stop running for a while for lack of fuel. Manufacturers and everybody else using coal were greatly inconvenienced. Many schools were closed, and the public lectures for adults given under the auspices of the Board of Education were almost entirely suspended for lack of fuel with which to heat the auditoriums. Churches also suffered. Some had to suspend services altogether. Other managed to continue, although inadequately heated, and their worshippers sat bundled up in their winter wraps as if they were out of doors.

Still greater disturbance came when, with only 24 hours' notice, Fuel Administrator Garfield decreed five fuel-less days beginning

* The above reference is to the temperature of New York City which has a winter climate much more moderate than other parts of the country. In some parts of the United States, as in Berlin, N. H., for instance, the mercury went down to 44° below zero on December 30, 1917.

Friday, January 18, 1918. At the same time he proclaimed the ten succeeding Mondays to be fuel-less altogether compelling an unprecedented suspension of commercial and industrial activity. This worked a great hardship, not only upon the business interests of the country, but also upon wage-earners who were thrown out of employment on these workless days. The effect of this order, combined with that of the legal holidays, would have been to leave very little working time in February if it had not been modified, as will appear from the following calendar of holidays:

| | | | |
|---|---|---|---|
| Saturday, | February | 2, | Half holiday |
| Sunday, | " | 3, | Holiday |
| Monday, | " | 4, | Workless day |
| Saturday, | " | 9, | Half holiday |
| Sunday, | " | 10, | Holiday |
| Monday | " | 11, | Workless day |
| Tuesday, | " | 12, | Lincoln's birthday |
| Saturday, | " | 16, | Half holiday |
| Sunday, | " | 17, | Holiday |
| Monday, | " | 18, | Workless day |
| Friday, | " | 22, | Washington's birthday |
| Saturday, | " | 23, | Half holiday |
| Sunday | " | 24, | Holiday |
| Monday, | " | 25, | Workless day |

Beginning with February 18, however, the workless Monday order was rescinded.

One noticeable effect of the coal shortage was the dimming of the glaring electric signs, and the subdued appearance of " The Great White Way," as Broadway in the theatre district of New York City is popularly called.

On November 2, 1917, the increased rates of postage went into effect in order to increase the Government's war revenue. Theretofore the rate for first class mail was two cents an ounce to any part of the United States, and postal cards were one cent each. On November 2, the rate on first class mail within a given postal district (drop letters) remained the same, but on mail going to another district the rate on letters was increased to three cents and on postal cards to two cents each. Many people who were not affected by the draft, who lived in the interior states and not in lively touch with European news, and who were in sections of

the country not acutely affected by food-shortage, had the actuality of the war brought home to them in this increase of postage.

The people at large have also been called upon to share the war-burden in many other ways. The tax of 8 per cent on railroad fares, 10 per cent on Pullman accommodations and 10 per cent on theatre tickets went into effect on November 1, 1917. Between January 1 and March 1, 1918, when persons having incomes of $1000 or more were making out their income tax returns, the cost of war was realized not only more seriously by those who had paid income taxes before, but also by hundreds of thousands of others who, for the first time in their lives, were called upon to pay an income tax or a tax of any kind. The war revenue law imposed many other taxes, but so far as the people generally were concerned, their effect reached them indirectly.

During the past year, there has been a notable predominance of war themes in the theatres. Never before have the theatres, particularly the moving-picture theatres, been so systematically and effectively used for educating public sentiment and stimulating patriotism. In this connection it is to be noted that during the past year American audiences have cultivated the habit, which they never had to any great extent before, of rising during the playing of the National Anthem. This tribute is, at the present time, also commonly paid to the national anthems of our allies. The newly aroused jealousy of the American people on this subject was singularly manifested in October, 1917, in the public clamor aroused by the refusal of Dr. Karl Muck, conductor of the Boston Symphony Orchestra, to have the American National Anthem played at the orchestra's concerts. The details of this sensation may be followed in the daily papers beginning October 31, 1917.

Cancellations of concerts by German and Austrian performers were not uncommon. And the Metropolitan Opera House of New York City omitted German opera entirely from its programme for the winter of 1917–1918.

Some of the matters which we have noted, like the last above-mentioned, are of little consequence and will not be thought of by our historians when they come to write of the war in its larger aspects; but they at least give the "human touch" to the great

tragedy now enacting, and we have often wished that the historians of former periods had given more such little human details.

While it is true that no thoroughly intelligent history of any war can be written while the war is in progress, the historian of our war with Germany and Austria will encounter unusual difficulties in performing his task, owing to the press and cable censorship and the unusual secrecy surrounding military movements and events. These precautions, due to the all-pervading spy-system of the enemy in the United States, make it practically impossible to state the date or details of many essential occurrences with any precision. For instance, during the Civil War, when a northern regiment left home for the front, the fact was definitely known. Now, the movement of our troops across the ocean is conducted with the utmost secrecy. The newspapers are allowed to make no mention of the departure of troops from training camps for embarkation. The men themselves, when they know in advance of such movements, are not allowed to disclose their knowledge to their friends. Regiments simply disappear from the country and fade away into the ocean mists — when and where few but themselves know — and bye and bye the people at home hear that the "second contingent," or some other indefinitely described body of our troops has arrived "somewhere in France." Only after our troops had been in France for six or seven months was any intimation given of their whereabouts, and that was very indefinite — "somewhere north of Toul." The names of places, the dates of events, the numbers and designations of troops engaged, which are fundamental guide-posts for the historian, are concealed even from ourselves. In the existing circumstances this is wise military policy, but it makes the task of the historian more difficult.

When the history of this war comes to be written, one inevitable, important and fortunate result of it will be the new attitude or relation of the United State to the history of Europe, and, reciprocally, the new attitude or relation of the countries of Europe to the history of the United States. Hitherto, the influence of the United States on the history of Europe — and it has been great — has been largely reflex or indirect. In the large and general sense, it is we who have been the debtors to European civilization. The

beginnings of our history, our art and our culture lie back in the histories of our many fatherlands before America was discovered or before our Union of States was formed. We go to Italy, Spain, France, the Netherlands and Great Britain to hunt up the records and landmarks of the discoverers and early explorers. We go to Durham, Sulgrave and Brington for reminders of the ancestral Washingtons; to Austerfield, Scrooby and old Boston for the early associations of Bradford, Brewster, and other Pilgrims; to Paris for the grave of Lafayette; to Amsterdam for the Weepers Tower from which Henry Hudson sailed; and so on. We go to Europe to study the great cathedrals and examples of classic architecture and to Rome, Florence, Venice, Paris and the Netherlands to study art. We have been developing an art, culture and civilization of our own, to be sure, but we are very young as yet; and we must acknowledge that our historical relation to the old world is yet that of child to parent, and of debtor to creditor.

But now we have been forced out of our one-sided position. We have been obliged by force of overwhelming circumstances to disregard the advice of Washington in his Farewell Address * to avoid foreign entanglements and alliances. We have turned about face and are now called upon to pay something of our debt of past centuries to the Old World. The Old World civilization to which we owe so much is now in mortal peril and we rush to the rescue. The works of geniuses who flourished before America was known are threatened with demolition by the modern Huns, and we send our men to protect and save these priceless fruits of that same civilization. For four and a quarter centuries the Old World has been contributing to the history of the New; and for four and a quarter centuries the New World has been developing

* Washington, in his Farewell Address to the American people September 19, 1796, said, among other things: "The great rule of conduct for us, in regard to foreign nations is, in extending our commercial relations, to have with them as little political connection as possible. . . . Europe has a set of primary interests which to us have none, or a very remote relation. . . . Our detached and distant situation invites and enables us to pursue a different course. . . . Why forego the advantages of so peculiar a situation? . . . Why, by interweaving our destiny with that of any part of Europe, entangle our peace and prosperity in the toils of European ambition, rivalship, interest, humour or caprice? 'Tis our true policy to steer clear of permanent alliances with any portion of the foreign world."

a history of its own. Now, for the first time, in any direct and large manner, the New World is contributing to the history of the Old — to the salvation of the Old World civilization and all its precious expressions in art and its best social and political institutions.

When the war is over, Americans can go to Europe and look at the cathedrals, the sculptures, the frescoes, the paintings, the libraries and museums, and with no little justification speak of them to a European jointly as "ours," not simply "yours." And we shall hope that hereafter, as the American student goes to Europe to study the beginnings of American history, so intellectual Europeans will come to America to study the sources of our contributions to European history, and to visit the landmarks of our great institutions and men.

Happy will be this closer drawing together and mutual understanding of the civilized peoples of the earth; and great will be the advance toward the goal of the universal brotherhood of man to which, by our sacrifices, we are now contributing.

## THE SOCIETY'S CHARTER

The charter of the American Scenic and Historic Preservation Society was first granted by special act of the Legislature of the State of New York which, by the Governor's signature on March 26, 1895, became chapter 166 of the laws of that year. It was subsequently amended by chapter 302 of the laws of 1898 and chapter 385 of the laws of 1901, and reads as follows:

*The People of the State of New York, represented in Senate and Assembly, do enact as follows:*

Section 1. The following persons: William H. Webb,* Samuel D. Babcock,* John M. Francis,* Andrew H. Green,* Charles A. Dana,* Oswald Ottendorfer,* Chauncey M. Depew, Horace Porter, William Allen Butler,* Mornay Williams, George G. Haven,* Elbridge T. Gerry, Walter S. Logan,* Henry E. Howland,* Edward P. Hatch,* William L. Bull,* James M. Taylor,* J. Hampden Robb,* Ebenezer K. Wright,* Alexander E. Orr,* William M. Evarts,* Wager Swayne,* Charles R. Miller, Frederick W. Devoe,* Elbridge G. Spaulding,* Frederick S. Talmadge,* Thomas V. Welch,* S. Van Rensselaer Cruger,* Frederick J. DePeyster,* Morgan Dix,* John A. Stewart, Charles C.

Beaman,* Francis Vinton Greene, Peter A. Porter, M. D. Raymond,* George N. Lawrence,* Benjamin F. Tracy, Augustus Frank,* Charles Z. Lincoln, John Hudson Peck, Sherman S. Rogers,* William Hamilton Harris, Lewis Cass Ledyard, Alexander B. Crane, John Hodge,* Robert L. Fryer,* J. S. T. Stranahan,* Samuel Parsons, Jr., Charles A. Hawley, Henry E. Gregory, Frederick D. Tappan,* Henry J. Cookinham, Henry R. Durfee,* H. Walter Webb,* and such others as shall become associated with them in the manner and upon the terms and conditions prescribed by the by-laws of the corporation hereby created, are hereby constituted a body politic and corporate by the name of the American Scenic and Historic Preservation Society, with all the powers and subject to the provisions of the eleventh section of chapter thirty-five of the general corporation law as amended by chapter six hundred and eighty-seven of the laws of eighteen hundred and ninety-two, except as otherwise provided by this act, and shall be capable of purchasing, taking, receiving and holding by gift, grant, devise, bequest, or otherwise, in trust or perpetuity, real and personal estate for the uses and purposes of said corporation, the value of which shall not exceed one million dollars. (Chapter 166, 1895, amended by chap. 302, 1898, and chap. 385, 1901.)

§ 2. The objects of said corporation shall be to acquire by purchase, gift, grant, devise, or bequest, historic objects or memorable or picturesque places in the state or elsewhere in the United States, hold real and personal property in fee or upon such lawful trusts as may be agreed upon between the donors thereof and said corporation, and to improve the same; admission to which shall be free to the public under such rules for the proper protection thereof as said corporation may prescribe, and which said property shall be exempt from taxation within the State of New York. (Chapter 166, 1895, amended by chap. 385, 1901.)

§ 3. The affairs and business of said corporation shall be conducted by a board of not less than five or more than thirty-five Trustees, a quorum of whom for the transaction of business shall be fixed by the by-laws. The persons now constituting the Board of Trustees of said corporation shall continue to hold office until others are elected in their stead as provided by the said by-laws. Vacancies in the Board of Trustees may be filled in the manner prescribed by the said by-laws. (Chapter 166, 1895, amended by chap. 302, 1898, and chap. 385, 1901.)

§ 4. None of the Trustees or members of said corporation shall receive any compensation for services, or be pecuniarily interested

* Now deceased.

directly or indirectly, in any contract relating to the affairs of said corporation, nor shall said corporation make any dividend or division of its property among its members, managers, or officers. (Chapter 166, 1895.)

§ 5. The Board of Trustees shall annually, at a time to be fixed by the by-laws, elect or appoint from their number the following officers: A President, four Vice-Presidents and a Treasurer, who shall hold office for one year and until their respective successors are elected or appointed, and shall perform such duties as are provided by the by-laws. The Board of Trustees may also appoint a Secretary and define his duties, and shall have the power to manage, transact, and conduct all business of the corporation, to prescribe the terms of admission of its members, and to appoint and fix the compensation of and remove its employes at pleasure. The said corporation shall have no capital stock, and shall have no power to sell, mortgage, or otherwise incumber any of its property. (Chapter 166, 1895, amended by chap. 385, 1901.)

§ 6. Said corporation shall annually make to the Legislature a statement of its affairs, and from time to time report to the Legislature, by bill or otherwise, such recommendations as are pertinent to the objects for which it was created, and may act jointly or otherwise with any persons appointed by any other State for similar purposes as those intended to be accomplished by this act, whenever the object to be secured or purpose sought to be accomplished is within the jurisdiction of this and any other State or can only be attained by such joint action. (Chapter 166, 1895.)

§ 7. This act shall take effect immediately.

## HEADQUARTERS OF THE SOCIETY

The headquarters of the Society are in the Tribune Building, at No. 154 Nassau Street, opposite the City Hall, New York City.

## OFFICERS, TRUSTEES AND COMMITTEES

At the Twenty-third Annual Meeting of the Society held in the American Museum of Natural History in New York City on Thursday evening, January 17, 1918, the twelve Trustees whose terms were about to expire were re-elected for three years. Mr. Alexander McMillan Welch of New York was elected to serve until January, 1919, to fill the unexpired term of Mr. J. Adams Brown; and Mr. Frederick A. Emerick of Oswego was elected to

serve until January, 1920, to fill the unexpired term of the late Henry M. Leipziger, Ph. D., LL.D.

The Trustees, at their next meeting, held on Monday, January 28, 1918, elected for the ensuing year the officers named below, and at the same meeting the President appointed the standing committees hereafter given. The names and addresses of the officers, Trustees and standing committees are as follows:

*Honorary President*

Mrs. E. H. Harriman.....New York

*President*

George Frederick Kunz, Ph. D., Sc. D.....New York

*Vice-Presidents*

1st, Col. Henry Woodward Sackett.....New York
2nd, Hon. Herbert Lawrence Bridgman.....New York
3rd, Reginald Pelham Bolton.....New York
4th, Hon. George Walbridge Perkins.....New York

*Treasurer*

Hon. N. Taylor Phillips.....New York

*Counsel*

Henry Ellsworth Gregory.....New York

*Secretary*

Edward Hagaman Hall, L. H. D.....New York

*Trustees Until January, 1919*

Henry Harper Benedict.....New York
Charles Mason Dow, LL. D.....Jamestown
Henry Ellsworth Gregory.....New York
Wolcott Julius Humphrey.....Warsaw
Frederick Stymetz Lamb.....New York
Ogden Pearl Letchworth.....New York
Emerson McMillin.....New York
Hon. N. Taylor Phillips.....New York
Col. Henry Woodward Sackett.....New York
Hon. Calvin Tomkins.....New York
Alexander McMillan Welch.....New York

*Trustees Until January, 1920*

Prof. Liberty Hyde Bailey.....Ithaca
Hon. Herbert Lawrence Bridgman.....New York
David Bryson Delavan, M. D.....New York
Frederick A. Emerick.....Oswego
George Frederick Kunz, Ph. D., Sc. D.....New York
Hon. Thomas William Meachem.....Syracuse
Hon. Adelbert Moot .....Buffalo
Hon. George Walbridge Perkins.....New York
Hon. Stephen Howard Thayer.....Yonkers
Hon. Robert Henry Treman.....Ithaca
Charles Delamater Vail, L. H. D.....Geneva
Col. John Wright Vrooman.....Herkimer

*Trustees Until January, 1921*

Edward Dean Adams, LL. D.....New York
Reginald Pelham Bolton.....New York
Henry Kirke Bush-Brown.....Washington, D. C.
Algernon Sydney Frissell.....New York
Francis Whiting Halsey.....New York
Hon. Thomas Pettibone Kingsford.....Oswego
Hon. Thomas Hamilton Lee.....Albany
Edward Lasell Partridge, M. D.....New York
Hon. Gordon Hastings Peck.....West Haverstraw
Hon. Thomas Redfield Proctor.....Utica
Hon. Charles Ainsworth Spofford.....New York
Albert Ulmann .....New York

*Executive Committee*

George F. Kunz, Ph. D., Sc. D., Chairman.....New York
Reginald Pelham Bolton.....New York
Algernon Sydney Frissell.....New York
Henry Ellsworth Gregory.....New York
Hon. George Walbridge Perkins.....New York
Hon. N. Taylor Phillips.....New York
Col. Henry Woodward Sackett.....New York
Hon. Charles Ainsworth Spofford.....New York
Hon. Stephen Howard Thayer.....Yonkers

*Auditing Committee*

Hon. Charles A. Spofford, Chairman.....New York
Hon. Herbert Lawrence Bridgman.....New York
Albert Ulmann .....New York

*Battle Island Park Committee*

Frederick A. Emerick, Chairman.....Oswego
(Members to be appointed)

*Central Hudson River Committee*

(Highlands District)

Edward L. Partridge, M. D., Chairman.....New York
Hon. Alphonso T. Clearwater.....Kingston
Edward F. Hill.....Peekskill
George Frederick Kunz, Ph. D., Sc. D.....New York
Henry Fairfield Osborn, Sc. D., LL. D.....New York
Capt. Henry Metcalfe, U. S. A.....New York
Albrecht Pagenstecher, Jr.....New York
Hon. Cornelius Amory Pugsley.....Peekskill
Rev. Walter T. Thompson.....Garrison

*Civic Improvements Committee*

Hon. Calvin Tomkins, Chairman.....New York
Edward Dean Adams, LL. D.....New York
Reginald Pelham Bolton.....New York
D. Bryson Delavan, M. D.....New York
Arthur Goadby.....New York
Frederick Stymetz Lamb.....New York
Emerson McMillin.....New York
Hon. George Walbridge Perkins.....New York

*Conservation Committee*

Charles Mason Dow, LL. D., Chairman.....Jamestown
Prof. Liberty Hyde Bailey.....Ithaca
Hon. Herbert Lawrence Bridgman.....New York
Henry Ellsworth Gregory.....New York
Wolcott Julius Humphrey.....Warsaw
George Frederick Kunz, Ph. D., Sc. D.....New York
Ogden Pearl Letchworth.....New York

*Finance Committee*

Hon. Charles A. Spofford, Chairman.....New York
Henry Harper Benedict.....New York
Algernon Sydney Frissell.....New York
Hon. N. Taylor Phillips.....New York
Col. Henry Woodward Sackett.....New York
Alexander McMillan Welch.....New York

*Fort Brewerton Committee*

Hon. Thomas Pettibone Kingsford, Chairman.....Oswego
Hon. Thomas D. Lewis.....Fulton
Hon. Thomas William Meachem.....Syracuse
Hon. Thomas Redfield Proctor.....Utica

*John Boyd Thacher Park Committee*

Francis Whiting Halsey, Chairman.....New York
Hon. Benjamin W. Arnold.....Albany
Mrs. Daniel Manning.....Albany
Prof. John C. Smock.....Hudson
Mrs. John Boyd Thacher.....Albany
Hon. James F. Tracey.....Albany

*Letchworth Park Committee*

Wolcott Julius Humphrey, Chairman.....Warsaw
Hon. Herbert Lawrence Bridgman.....New York
Charles Mason Dow, LL. D.....Jamestown
Francis Whiting Halsey.....New York
Hon. Thomas Pettibone Kingsford.....Oswego
Ogden Pearl Letchworth.....New York
Hon. Adelbert Moot .....Buffalo
Hon. N. Taylor Phillips.....New York
Hon. Robert Henry Treman.....Ithaca
Charles Delamater Vail, L. H. D.....Geneva

*Lower Hudson River Committee*

(South of Highlands)

Hon. George Walbridge Perkins, Chairman.....New York
Hon. Abram De Ronde.....Englewood, N. J.
Cleveland H. Dodge.....New York
Waldo G. Morse.....Yonkers
William C. Muschenheim.....New York

*Niagara Falls Committee*

Hon. Adelbert Moot, Chairman.....Buffalo
Charles Mason Dow, LL. D.....Jamestown
Frederick A. Emerick.....Oswego
Henry Ellsworth Gregory.....New York
Hon. Thomas Pettibone Kingsford.....Oswego
Hon. Thomas W. Meachem.....Syracuse
The Secretary .....New York

*Nominating Committee*

Hon. Herbert Lawrence Bridgman, Chairman....New York
D. Bryson Delavan, M. D.....New York
Francis Whiting Halsey.....New York
Hon. Robert Henry Treman.....Ithaca
Col. John Wright Vrooman.....Herkimer

*Philipse Manor Hall Committee*

Hon. Stephen H. Thayer, Chairman.....Yonkers
Miss Mary Marshall Butler.....Yonkers
Alexander Smith Cochran.....New York
Hampton D. Ewing.....Yonkers
Miss Elizabeth P. Hale.....Yonkers
Mrs. Alexander Henderson.....Yonkers
William L. Kingman.....Yonkers
Mrs. Florence S. Rogers.....Yonkers
Nathan A. Warren, M. D.....Yonkers

*Sites and Inscriptions Committee*

Reginald Pelham Bolton, Chairman.....New York
Francis Whiting Halsey.....New York
Frederick Stymetz Lamb.....New York
Albert Ulmann .....New York
Alexander McMillan Welch.....New York
The Secretary .....New York

*Soldiers' Graves Committee*

Col. Henry W. Sackett, Chairman.....New York
Hon. Herbert Lawrence Bridgman.....New York
George Frederick Kunz, Ph. D., Sc. D.....New York
Hon. N. Taylor Phillips.....New York
The Secretary .....New York

*Stony Point Reservation Committee*

Hon. Gordon Hastings Peck, Chairman....West Haverstraw
Henry Kirke Bush-Brown.....Washington, D. C.
Hon. Thomas Hamilton Lee.....Albany
Henry Fairfield Osborn, Sc. D., LL. D.....New York
Edward Lasell Partridge, M. D.....New York
Hon. Cornelius Amory Pugsley.....Peekskill
The Secretary .....New York

*Tappan Monument Committee*

Frank R. Crumbie, Chairman.....Nyack
Hon. Thomas Hamilton Lee.....Albany
Hon. Gordon Hastings Peck.....West Haverstraw
Eugene F. Perry.....Nyack
Van Wyck Rossiter.....Nyack
Hon. Stephen Howard Thayer.....Yonkers

## ORIGIN AND SCOPE OF SOCIETY

Readers of this Report who are interested in the origin, scope, theory and philosophy of this Society are referred to our last and earlier Reports in which these subjects are set forth *in extenso.* Some features of the Society's work are summarized in the President's brief report presented at the Society's 23d Annual Meeting held in the American Museum of Natural History, in New York City, on Thursday evening, January 17, 1918, which may be repeated in substance here.

This Society was founded by Andrew H. Green, "the Father of Greater New York," twenty-three years ago. The charter of the Society is unique. It not only empowers the corporation to hold personal and real property in fee or upon trust, and to protect and care for historical objects and memorable and picturesque places, but it also requires the Society to make an Annual Report to the Legislature, and gives it the exceptional privilege of making to the Legislature, from time to time, by bill or otherwise, such recommendations as are pertinent to its work.

The requirement of an Annual Report to the Legislature is due to the fact that by various special laws, the Society is made legal administrator of State properties and disburses State funds appropriated for those objects. In this Report a detailed accounting is given of the Society's operations; a general survey is made of the scenic and historic preservation movement in the United States and foreign parts; and the results of much original research are embodied. In this report the Society makes its chief recommendations to the Legislature.

Between these Annual Reports, the Society exercises sparingly its special privilege of making recommendations to the Legislature by bill or otherwise. The Board of Trustees believes that its influence is enhanced by making few recommendations to the

Legislature, and those only on weighty occasions. Partly for this reason the State government has accorded generous recognition to the Society's overtures, and it has created and accepted as gifts twelve scenic and historic properties wholly or chiefly upon the Society's initiative. The Society is legal custodian and administrator of six of these.

The largest is Letchworth Park, a beautiful estate of 1,000 acres on the Genesee river embracing the three famous Portage Falls. The scenery here is esteemed by many to rank second only to that of Niagara Falls. The property was given to the State through the Society by the late William Pryor Letchworth, the philanthropist, who made the Society his residuary legatee. (See pages 65, 76–96 following.)

The next largest park in our custody is John Boyd Thacher Park, consisting of 350 acres, lying on the Helderberg escarpment about 20 miles west of Albany. The park is beautiful in itself and from the rim of the cliffs on a clear day one can see the peaks of the Adirondacks to the northward and the Green Mountains to the eastward. It is a famous resort for geologists who are able here to study stratigraphy and gather fossils with great facility. This property was given to the State by Mrs. John Boyd Thacher of Albany, in memory of her distinguished husband. (See pages 66, 106–116 following.)

The next in size is Battle Island Park on the Oswego river, between Fulton and Oswego, comprising 200 acres, given to the State by Mr. Frederick A. Emerick of the latter city. It has been a natural camping place since Colonial days, and was the scene of a battle between Colonial troops under Capt. John Bradstreet and a body of French and Indians in 1756. (See pages 67, 116–117.)

Stony Point Battlefield on the Hudson comes next in area, with its 35 acres of ground made historic by Gen. Anthony Wayne's famous midnight capture of the fortress from the British in 1779 and many other events of the Revolutionary Period. (See pages 64, 69–74.)

Fort Brewerton, on the Oneida river near the mouth of Oneida Lake, contains but an acre, upon which are the earthworks of a noted fortification of the French and Indian war. (See pages 65, 75–76.)

The most ancient, and in some respects the most interesting of our charges, is the Philipse Manor Hall at Yonkers, which was given to the State by the late Mrs. William F. Cochran, and restored with means given by her and her son, Mr. Alexander Smith Cochran. Besides the historic associations of this venerable structure, it contains a remarkable collection of portraits of the Presidents of the United States and other famous Americans by Copley, Peale, Stuart, and other American artists. The collection, made by Mr. Cochran, is valued at $100,000. (See pages 65, 96–106.)

These administrative trusts of the Society are not, however, the full measure of its accomplishments. The most conspicuous example of a great public work which was initiated by the Society, but which is administered under other auspices, is the Palisades Interstate Park. At the request of Gov. Roosevelt, this Society officially represented the State of New York in cooperation with the representatives of the State of New Jersey in devising the legislation which created this park, now embracing 30,000 acres as the result of generous private gifts and liberal state appropriations. With the Commissioners who have so admirably administered that beneficent institution, our Trustees have always been in cordial cooperation.

An idea of the indirect results of the public and private sentiment fostered by our work may be had from the statement that members of the Society have made gifts to the State and cities for parks and municipal improvements to the known amount of over $3,500,000.

The Society has also done a vast amount of work in the way of giving information, advice and moral support to individuals, civic organizations and public officials all over the Union, with results which cannot be estimated. Before the European War we were in active collaboration with cognate institutions in Canada, England, France, Belgium, the Netherlands and Germany; and can trace to our efforts the formation in Japan of the Japanese Society for Preserving Landscapes and Historic and Natural Monuments. Correspondence with a view to establishing the movement in Russia has been interrupted.

During the past year the properties in our care have been made auxiliary to war work when possible. This has been the

case notably at Stony Point Reservation, which was used for a camp-ground, and at Philipse Manor Hall, where the American Red Cross and the D. A. R. have been carrying on Red Cross work.

The public pleas by the Society for the preservation of St. John's Chapel, New York City, with a view of using it immediately for war relief activities and later as a center for historical and civic purposes have not yet been rewarded with success. The old church yet stands, by the indulgence of the municipal authorities, and we still hope that private philanthropy will provide the means of saving this historic landmark and at the same time providing a center for valuable civic work.

The most important work contemplated by the Society in connection with the war has to do with the identification, registration and care of soldiers' graves on the Allied fronts. What we have in view in this direction is explained more fully hereafter.

The destruction of monumental buildings and works of art in the European war and our hope to be of aid in their restoration are also fully explained on following pages.

Three years ago, and again a year later, it was our pleasure to show a system of flags designed for marking museums, colleges, public libraries, and other institutions during time of war — the flag to afford protection, so far as possible, when the enemy were bombarding cities or towns. It would seem most important that in addition to this it should not be permitted that statues, monuments, and other objects of historical or artistic value be injured or taken from one country into another. And it should be so arranged that if, during a war, or after a war, such objects appear in any country, the ownership of them shall remain to the country from which they may have been forcibly taken. We have in mind especially some large broken stone heads of great statues of China and Siam that have been taken from these statues, of which they were part, for personal gain, the severing of the heads resulting not only in the desecration of the statues, but also making them of little value, and the worth of the heads themselves losing, in proportion, a hundredfold. In our next tribunal some action should be taken to protect statues, monuments, important buildings, historical and artistic objects and prevent their removal by a conquering nation, whether they be the horses of St. Mark's

which were taken by a Napoleon in the 18th century, or any treasure taken by the armies of any ruler in the 20th.

During the past year our Society has been liberally represented on the Citizens' Committees appointed by Mayor Mitchel of New York to receive the foreign War Commissions. It also had an important part in the arrangement of the celebration of the opening of the great Catskill Aqueduct; in the municipal celebration of Independence Day, and in the celebration of Lafayette Day. Its representative was also invited by the Mayor to serve upon his special advisory committee in the matter of the West Side improvement with a view to the preservation of Riverside Park.

The Society notes with no little satisfaction the drift of sentiment toward the building of more tunnels under the Hudson river and the utilization of the New Jersey flatlands for railroad trackage and freight exchange as an important part of proposed relief of the West Side situation — measures recommended by the President of this Society for the past seven years.

During the session of the last Legislature, the Society with conspicuous success availed itself of its privilege to advise upon legislation and secured an amendment to Senator Ottinger's bill which originally provided that a strip might be taken off from the west side of Central Park for the widening of Central Park West and the reduction of danger from the street cars. Upon our representations the bill was changed so as to leave Central Park intact.

Our most important work in the way of marking historic places was the erection, at No. 257 Pearl street, of a tablet marking the site of the first Edison underground central station system in this country.

The foregoing are only a few illustrations of the activities which engage our constant attention; and further details of which are given in the following pages.

The Report of our Treasurer, Mr. Phillips, shows, among other things, that we have cash balances, securities, real estate and other physical property of a value of $81,558. This is a fact to be proud of, but it has its limitations. Part of this sum is represented by land, buildings and equipment, such as work-houses and

working apparatus, which are used for public purposes and produce no revenue. Part is represented by securities, such as the Letchworth Legacy, the income of which is applicable only to the care of public property. The income from securities which is applicable to general expenses is not adequate to the needs of the growing work of the Society and is supplemented by membership dues and occasional private gifts. During the past year our headquarters' expenses were only $5,192; and with a somewhat extended knowledge of the operations of other organizations, the President does not know of any that does as much effective work for the public benefit in proportion to the amount of money expended as this Society. Twenty-three years ago the Society began with an annual membership fee of five dollars. Believing that the record of accomplishments and the increased scope and efficiency of the Society's work now justify a larger annual due, the Trustees at their monthly meeting in December, 1917, fixed the annual dues at ten dollars, which is the amount charged by other institutions of equal standing. The Trustees rely on the public spirit of the Society's members and friends to sustain their hands in the work which they have carried on for nearly a quarter of a century and which grows in importance and volume as the years roll on. Our civic institutions must be maintained in these trying times, not only for their current and contemporary service, but also in order that these trained and experienced agencies of civic betterment may be kept alive for the indispensable duties which will arise in the better years soon to come.

The Society wishes to make grateful acknowledgment of the cooperation of the American Museum of Natural History and its President, Prof. Henry Fairfield Osborn, and other officers, for their countenance and moral support throughout the year and their hospitality at the Annual Meeting. The recognition, encouragement and help accorded to us by this "big brother" institution are of inestimable value to us.

## STATE FUNDS

During the year 1917 we received from the State Treasurer and disbursed on account of State properties the following amounts:

### Stony Point Reservation

| | | | | |
|---|---|---|---|---|
| Under chapter | 646, | laws of 1916, part 1 | $611 67 | |
| | 181, | 1917, part 1 | 500 00 | |
| | | | | $1,111 67 |

### Letchworth Park

| | | | | |
|---|---|---|---|---|
| Under chapter | 727, | laws of 1915 | $251 97 | |
| | 646, | 1916, part 1 | 4,439 05 | |
| | 646, | 1916, part 3 | 578 29 | |
| | 181, | 1917, part 1 | 3,374 16 | |
| | 181, | 1917, part 3 | 304 16 | |
| | 181, | 1917, part 5 | 1,200 63 | |
| | | | | 10,148 26 |

### Philipse Manor Hall

| | | | | |
|---|---|---|---|---|
| Under chapter | 646, | laws of 1916, part 1 | $2,160 27 | |
| | 181, | 1917, part 1 | 1,342 29 | |
| | 181, | 1917, part 3 | 200 00 | |
| | | | | 3,702 56 |

### John Boyd Thacher Park

| | | | | |
|---|---|---|---|---|
| Under chapter | 725, | laws of 1915 | $88 22 | |
| | 726, | 1915 | 56 00 | |
| | 646, | 1916, part 1 | 1,335 11 | |
| | 181, | 1917, part 1 | 1,228 50 | |
| | 181, | 1917, part 3 | 891 10 | |
| | 181, | 1917, part 5 | 2 29 | |
| | | | | 3,601 22 |
| | | | | $18,563 71 |

Our accounts for these funds are with the National City Bank.

## SOCIETY FUNDS

The Society has five separate funds of its own, namely:

1. The General Fund.
2. The William Barr Fund.
3. The Andrew H. Green Memorial Fund.
4. The Manor Hall Fund, Cochran Gift.
5. The Letchworth Legacy.

# General Financial Statement

## General Fund

The General Fund consists of receipts from membership dues, special donations and certain investments and is used for the general work of the Society. Following is a classified statement of receipts and disbursements for the year ended December 31, 1917:

### Receipts

| | | |
|---|---|---|
| Balance on hand January 1, 1917 | | $99 37 |
| Annual members, at $5 | $1,715 10 | |
| Sustaining members, at $25 | 175 00 | |
| Special subscribers, at $50 | 450 00 | |
| Interest on Mrs. Wm. H. Bliss' gift | 50 00 | |
| Interest on Mrs. Henry Draper gift | 100 00 | |
| Interest on Mrs. Russell Sage gift | 303 75 | |
| Interest on Hiram Messenger legacy | 42 50 | |
| Interest on Andrew H. Green fund | 400 00 | |
| Interest on special paid-up subscriptions | 25 00 | |
| Interest on Mrs. William Barr gift | 25 00 | |
| Part of principal of Mrs. Wm. Barr gift and interest | 2,096 27 | |
| Miscellaneous, refunds, etc. | 39 47 | |
| Sales of Annual Reports | 21 41 | |
| | | 5,443 50 |
| Total general receipts | | $5,542 87 |
| Maturity of part of Mrs. Sage investment | | 4,000 00 |
| | | $9,542 87 |

### Disbursements

| | | |
|---|---|---|
| Arrears | | None |
| Secretary's salary | | $2,499 96 |
| General printing and stationery | | 240 94 |
| Special printing: | | |
| 600 extra Annual Reports | $620 00 | |
| Minutes of Trustees' meetings | 152 85 | |
| Scenic and Historic America | 79 02 | |
| | | 851 87 |
| Postage, telegrams and exchange | | 339 88 |
| Stenographer | | 487 19 |
| Public meetings (other than printing and postage) | | 24 25 |
| Telephone | | 10 43 |
| Office rent | | 360 00 |
| Traveling expenses | | 65 39 |
| Press clippings | | 7 31 |
| Messenger, freight and express | | 84 03 |

| | | |
|---|---|---|
| Photographic and drawing materials | $72 42 | |
| Contingent expenses | 148 36 | |
| Total expenses | $5,192 03 | |
| Reinvestment of Mrs. Sage's gift | 4,000 00 | |
| | | $9,192 03 |
| Balance on hand December 31, 1917 | | $350 84 |

In addition to the foregoing balance of $350.84 we have investments as follows, the inventory value being as of December 31, 1917:

| | Par Value | Inventory |
|---|---|---|
| Mrs. Wm. H. Bliss gift: One 5% guaranteed first mortgage certificate, Series H, No. 1869, of the Westchester & Bronx Title & Mortgage Guaranty Co. | $1,000 00 | $1,000 00 |
| Mrs. Henry Draper gift: Two 5% guaranteed first mortgage certificates of $1,000 each, Series PP, Nos. 4879 and 4880, of the Westchester & Bronx Title & Mortgage Guaranty Co. | 2,000 00 | 2,000 00 |
| Mrs. Russell Sage gift: One 4¼% New York City bond, due 1930–1960, Series W11, No. 981 | 1,000 00 | 880 00 |
| Mrs. Russell Sage gift: 4% registered Liberty bonds (bonds not yet received) | 4,000 00 | 3,880 00 |
| Hiram J. Messenger legacy: One 4¼% New York City bond, due 1930–1960, Series W11, No. 517 | 1,000 00 | 880 00 |
| Mrs. Wm. Barr gift: Two 5% guaranteed first mortgage certificates, Series J, Nos. 2368 and 2369, of the Westchester & Bronx Title & Mortgage Guaranty Co., $500 each | 1,000 00 | 1,000 00 |
| Mrs. Wm. Barr gift: Two United States First Liberty Loan 4% convertible gold bonds, due 1932–1947, Nos. 113,993 and 113,994, $1,000 each | 2,000 00 | 1,938 80 |
| | $12,000 00 | $11,578 80 |

These securities are in the Society's safe with the Corn Exchange Safe Deposit Co. at 253 Broadway.

### William Barr Fund

In November, 1916, Mrs. William Barr of Llewellyn Park, N. J., gave to the Society the sum of $5,000 for general use, and it was placed temporarily on deposit with the New York Life Insurance and Trust Co. at 52 Wall street. Following is an accounting:

# General Financial Statement

RECEIPTS

| | |
|---|---|
| Mrs. William Barr's gift | $5,000 00 |
| Interest on deposits | 107 40 |
| | $5,107 40 |

DISBURSEMENTS

| | |
|---|---|
| Invested in securities | $3,000 00 |
| Paid accrued interest on securities | 11 13 |
| Paid to Society's General Fund | 2,096 27 |
| | $5,107 40 |

As above indicated, the bank account is closed and the securities are listed with the General Fund securities above.

## Andrew H. Green Memorial Fund

The Andrew H. Green Memorial Fund consists of $10,000 given to the Society by the heirs of the Society's Founder and in his memory. The principal is permanently invested as follows; the inventory value being as of December 31, 1917:

| | Par Value | Inventory |
|---|---|---|
| One 4% registered gold certificate, Series V5, No. 1, of corporate stock of the City of New York, due in May, 1957 | $10,000 00 | $8,500 00 |

The certificate is in the Society's safe with the Corn Exchange Safe Deposit Co., at 253 Broadway.

The income from this fund during the past year, amounting to $400, was paid into the General Fund for the payment of the following bills included in the General Fund statement:

| | |
|---|---|
| Boyd's City Despatch, delivering Annual Reports | $32 40 |
| Lakeside Press, printing minutes | 29 45 |
| B. M. Smith, multigraphing | 8 40 |
| Polhemus Printing Co., stationery | 19 20 |
| R. S. Yard, traveling expenses | 14 55 |
| D. E. Becker, stenographer | 140 00 |
| The Tribune Association, office rent | 150 00 |
| Lincoln Safe Deposit Co., storage | 6 00 |
| | $400 00 |

### Manor Hall Fund, Cochran Gift

The Manor Hall Fund consists of the balance of moneys given by the late Mrs. William F. Cochran and her son, Alexander Smith Cochran, for the renovation of the Philipse Manor Hall at Yonkers and the publication of the Manor Hall book. Besides Mrs. Cochran's original gift of $50,000 for the purchase of the Manor Hall, which was paid directly to the City of Yonkers, Mrs. Cochran and her son have given to the Society $17,264.75 for the renovation of the Manor Hall and $865.04 for the Manor Hall book. In previous annual reports we have accounted for the major portion of these moneys. Following is a statement for the year ended December 31, 1917:

RECEIPTS

| | |
|---|---|
| Balance on hand January 1, 1917 | $245 99 |
| Received from sale of Manor Hall books | 32 00 |
| On deposit in National City Bank | $277 99 |
| On deposit with Manor Hall Committee | 250 00 |
| | $527 99 |

There have been no net disbursements during the past year. The $250 on deposit with the Manor Hall Committee is used as a revolving fund for payment of certain bills subject to reimbursement from State funds.

Of the above balance, $243.48 represents proceeds from sales of Manor Hall books and is reserved for the next edition.

### Letchworth Legacy

The Letchworth Legacy consists of the cash and securities which, with the physical property, constituted the residuary estate left to this Society by the late William Pryor Letchworth, donor of Letchworth Park to the State of New York. It is applicable exclusively to Letchworth Park. Following is a classified statement of receipts and disbursements for the year ended December 31, 1917:

# General Financial Statement

RECEIPTS

| | |
|---|---|
| Balance on hand January 1, 1917 | $4,829 70 |
| Victor Fuel Co | 200 00 |
| United States Steel | 273 00 |
| Pennsylvania Railroad | 309 00 |
| Chicago, Burlington & Quincy R. R | 80 00 |
| Rochester Railway | 250 00 |
| Chicago and Northwestern R. R | 120 00 |
| Detroit Railway | 250 00 |
| Interest on deposits | 91 50 |
| | $6,403 20 |

DISBURSEMENTS

| | | |
|---|---|---|
| Purchase of Davis lot, two acres | $1,000 00 | |
| Investment and accrued interest | 2,011 13 | |
| Forester's expenses | 154 13 | |
| Seeds | 141 08 | |
| Labor | 190 00 | |
| Librarian | 466 65 | |
| Automobile | 389 85 | |
| Contingent | 214 36 | |
| | | 4,567 20 |
| Balance on hand December 31, 1917 | | $1,836 00 |

The above balance is with the New York Life Insurance & Trust Co., at 52 Wall street.

We have at Letchworth Park physical property forming part of Mr. Letchworth's estate which in 1911 had an inventory value of.. $14,199 91

We also have at Letchworth Park property purchased from the Legacy as follows:

| | | |
|---|---|---|
| Library and Museum building | $9,996 45 | |
| Land, Bishop lot, 5.3 acres | 1,275 00 | |
| Land, Davis lot, 2 acres | 1,000 00 | |
| Furniture | 147 58 | |
| Horses, etc. | 1,878 35 | |
| | | 14,297 38 |
| | | $28,497 29 |

We also have, in the Society's safe with the Corn Exchange Safe Deposit Co., at 253 Broadway, the following securities, the inventory value being stated as of December 31, 1917:

| | Par Value | Inventory |
|---|---|---|
| Certificate No. A 442,692 of 100 shares of capital stock of the Pennsylvania R. R. Co., par value of $50 a share | $5,000 00 | $4,700 00 |
| Certificate No. A 442,693 of 3 shares of capital stock of the Pennsylvania R. R. | 150 00 | 141 00 |
| Five 5% first mortgage gold bonds of the Detroit Railway Co., Nos. 671, 1232, 1233, 1234 and 1235, due in 1924, par value of $1,000 each | 5,000 00 | 4,250 00 |
| Four 5% first mortgage sinking fund gold bonds of the Victor Fuel Co. of Denver, Colo., Nos. 1954, 1955, 1956 and 1957, due in 1953, par value of $1,000 each | 4,000 00 | 3,400 00 |
| Five 5% gold mortgage bonds of the Rochester Railway Co., Nos. 70, 71, 72, 73 and 1828, due in 1930, par value of $1,000 each | 5,000 00 | 5,000 00 |
| Certificate No. C. 349498 of 39 shares of preferred capital stock of the U. S. Steel Corporation, par value of $100 each | 3,900 00 | 4,212 00 |
| Three 4% general mortgage gold bonds of the Chicago & Northwestern R. R., Nos. 43,719, 43,720 and 44,338, due in 1987, par value of $1,000 each | 3,000 00 | 2,400 00 |
| Two 4% general mortgage bonds of the Chicago, Burlington & Quincy R. R., Nos. 42,541 and 42,542, due in 1958, par value of $1,000 each | 2,000 00 | 1,625 00 |
| Two First Liberty Loan 4% convertible gold bonds of the United States, 1932–1947, Nos. 113,995 and 113,996, par value of $1,000 each | 2,000 00 | 1,938 80 |
| Two certificates of two shares of the capital stock of the Buffalo Female Academy, Nos. 213 and 214, par value of $100 each | 200 00 | 1 00 |
| | $30,250 00 | $27,667 80 |

## Miscellaneous Properties

The Society also owns the following properties:

At Stony Point, N. Y., 1.16 acres of land valued at $750, given to the Society July 23, 1908, by Ada F. Allison and others, of Stony Point, adjoining the State Reservation. Upon it stands the Memorial Arch erected by the Daughters of the Revolution at a cost of $3,500.

At Tappan, N. Y., the Andre Monument and a circular plot of land 51 feet in diameter, purchased November 13, 1905, from George Dickey of Nyack, N. Y., for the sum of $250. The monument alone, erected by Cyrus W. Field, and dedicated October 2,

1879, cost $1,500, to which we have added a tablet costing about $100.

## NECROLOGY

During the year 1917 we removed from our membership rolls on account of death the following names. The dates here given are those of their decease.

Mrs. William Barr, Llewellyn Park, N. J., January 2, 1917.
Hon. William Berri, Brooklyn, April 19, 1917.
Alfred J. Bloor, Stonington, Conn., November 20, 1917.
Hon. Joseph H. Choate, New York, May 14, 1917.
Hon. John D. Crimmins, New York, November 9, 1917.
John M. Gesner, Nyack, N. Y., November 9, 1917.
Martin Green, Worcester, Mass., July 31, 1917.
Hon. William B. Howland, New York, February 27, 1917.*
Mrs. D. Willis James, New York, 1916.†
Henry M. Leipziger, Ph. D., LL. D., New York, December 1, 1917.
Henry Parish, New York, September 18, 1917.
Mrs. Julius T. Rockwell, Yonkers, January 12, 1917.
Isaac N. Seligman, New York, October 30, 1917.
A. C. Tucker, Nyack, N. Y., February 14, 1917.
Capt. George A. White, New York, March 8, 1917.
August Zinsser, New York, October 8, 1916.†

### Joseph Hodges Choate

By far the most distinguished member of the Society at the time of his death was Hon. Joseph Hodges Choate, who passed away at his residence, No. 8 East 63d Street, New York City, at 11.30 p. m. Tuesday, May 15, 1917. His death came as a special shock to his fellow-citizens, as he had recently been taking a prominent part in the reception of the French and British war commissions, and had appeared in public no later than the previous Sunday morning in the Cathedral of St. John the Divine with Mr. Balfour, the head of the British commission. He had been a sufferer from angina pectoris, and had undergone unusual fatigue in the performance of his duties in connection with the reception of the war envoys; but his end came so unexpectedly that no physician was with him at the time.

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* See obituary notice in last Annual Report.
† Reported in 1917.

Mr. Choate was born at Salem, Mass., January 24, 1832. He had therefore passed over a quarter of his eighty-sixth year. After taking his A. B. in 1852 and his LL. B. in 1854 at Harvard College, he was admitted to the Bar of Massachusetts in 1855 and of New York in 1856. On account of his distinguished ability in the law and his eminent public services, he received the honorary degree of LL. D. successively from Amherst, Harvard, Cambridge, Edinburgh, St. Andrew's Glasgow, Williams, Pennsylvania, Union, McGill and Toronto colleges and universities, and D. C. L. from Oxford University.

It would be futile to attempt to compress within the few pages of a biographical sketch any adequate review of the many and great public services by which Mr. Choate endeared himself to his fellow-citizens and evoked from them the spontaneous acknowledgment of "First Citizen." It is safe to say that there was not a man living who had taken such a prominent and active part in public affairs, who was so universally respected and for whom his fellow-citizens had such a deep and real affection.

We will, however, give two personal reminiscences of Mr. Choate as contributions to the minor incidents of his career:

Mr. Choate was the Ambassador from the United States to Great Britain from 1899 to 1905, and among the many signal honors bestowed upon him was that of being made a Bencher of the Middle Temple on April 10, 1905. The Middle Temple is one of the four Inns of Court, the name given to certain voluntary societies which have the exclusive privilege of calling persons to the English bar. The four Inns of Court are called Lincoln's Inn, the Inner Temple, the Middle Temple and Gray's Inn. The origin of these societies dates back to the 13th century. The Inner and Middle Temple societies take their names from the buildings which once belonged to the Knights Templars and they use the old Temple Church as their chapel.

When the Secretary of the American Scenic and Historic Preservation Society visited the Middle Temple in 1906 he was told the following incident of Mr. Choate's admission to the English bar. King Edward greatly admired Mr. Choate and conceived a great friendship for him and, as the time of the Ambassador's departure approached, the King sought to learn

what he could do that would please Mr. Choate most. The latter intimated that nothing would please him more than to become a Bencher of the Middle Temple. The King, who was also a Bencher, easily arranged the matter, and the ceremony of induction took place, with the accompaniment of a distinguished banquet, in the Gothic Hall of the Middle Temple. In this great hall, Queen Elizabeth witnessed the first performance of Shakespeare's "Twelfth Night," February 2, 1601–2, and here, upon a table made from one of the ships of Spain's "Invincible Armada," captured in 1588, part of the ceremonial feast was spread in Mr. Choate's honor on April 10, 1905. The King himself was present at the conferring of the honor on the Ambassador. Part of the ceremony was the signing of the great book containing the names of Benchers admitted in former years. By prearrangement, a book-mark had been laid in this volume at a certain place, and after Mr. Choate had signed his name, the pages were turned back by the King's direction to the book-mark, and there Mr. Choate had the pleasure of reading the names of several other men who had been admitted to the same legal honors and who later became Americans identified with the War for Independence.

Mr. Choate was asked later by the Secretary of this Society if the story of the incident were true, and he confirmed it, although he could not recall the names of the earlier American signers.

The other incident, which we give from personal recollection, occurred at the dedication of the buildings of the College of the City of New York in September, 1907, and illustrates the quickness of the wit for which Mr. Choate was famous.

Dr. John H. Finley, then President of the College and now State Commissioner of Education, presided. There was a notable list of speakers including Mr. Choate, who was near the end of the program,— a post of honor oftentimes assigned to a distinguished speaker, as it is known that everybody will remain to hear him. President Finley introduced Mr. Choate as "our First Citizen." Mr. Choate rose with a merry twinkle in his eye, and began by saying, in effect:

"Dr. Finley, in calling me 'First Citizen,' reminds me of the casts of characters of some of Shakespeare's plays. You doubtless

have noticed that at the beginning of some of these plays you have a list of those who are to appear upon the stage. First you have the King, then the Queen, then the Dukes, and then the other prominent personages, and down near the end of the list, where they just want to fill up, they have the 'First Citizen' and the 'Second Citizen,' etc."

A burst of laughter from the audience attested its appreciation of Mr. Choate's sally.

Mr. Choate was buried at Stockbridge, Mass. In lieu of flowers, this Society sent as its tribute a plate glass tablet which was placed in his casket and which bore upon it the following etched inscription:*

JOSEPH HODGES CHOATE, LL.D., D. C. L.
Born at Salem, Massachusetts, January 24, 1832.
Died at 8 East 63d Street, New York City
May 14, 1917.
Buried at Stockbridge, Massachusetts
Lawyer, Statesman, First Citizen of New York.
Ambassador to Great Britain 1899–1905.
Chairman of Mayor's Committee to
Receive French and British War
Commissioners in New York May 9–13, 1917.
Member of the American Scenic and Historic
Preservation Society, 1899–1917.

## Henry Marcus Leipziger

Henry M. Leipziger, Ph. D., LL. D., who died in Mount Sinai Hospital, New York City, on December 1, 1917, had been a member of this Society for full fourteen years, a Trustee for nearly that period, and a Vice-President for the last thirteen years. For many years he contended heroically with impaired health, but his unconquerable will and his determination to be useful to his fellow-men kept him actively in affairs until a very few months before his death.

* Similar tablets have been placed in the caskets of Very Rev. Dean William M. Grosvenor who died December 9, 1916; Mrs. William Barr, who died January 2, 1917; and Dr. William Bailey Howland, who died February 27, 1917. The tablets are about six by eight inches in size and one inch thick, made of bevelled plate glass, and the inscription is etched with acid. The idea of these tablets is that, as means of identification, they will last longer than any metal tablet which may be placed upon the coffin. Even if the acids of the earth attack the glass, they will deepen the parts previously etched faster than the polished surface, and thus leave the inscription legible.

Dr. Leipziger was born in Manchester, Eng., December 29, 1854, and came to New York in 1865. He received the degrees of A. B. and B. S. from the College of the City of New York in 1873; LL. B. from Columbia in 1875, Ph. D. in 1888, and LL. D. from Union College in 1907. In 1875 he was admitted to practice at the New York bar, but his career was that of an educator. From 1873 to 1881 he taught in the New York public schools and then for three years he traveled, studying and investigating methods of industrial education. Thus prepared, he organized and from 1884 to 1891 directed the Hebrew Technical Institute of New York. From 1891 to 1896 he was an Assistant Superintendent of Public Schools in New York, and for the remainder of his life he was Supervisor of Public Lectures of the Board of Education,— an institution which he founded in 1890 and which is his greatest monument.

This free lecture system for adults Dr. Leipziger liked to call the People's University. In the twenty-seven years of its existence it has come to be such an accepted fact in the educational system of the metropolis and has been imitated in so many other cities, that the originality and far-reaching value of the institution may not appear to the reader at first sight. The lecture platform of course is nothing new and the lyceum system is nothing new. Stereopticon pictures are not new. But a free lecture system for adults — working people who had been deprived of the benefits of education when they were children, people who had no money to spend on such things for themselves,— *was* something new. Dr. Leipziger saw among other things that with our modern educational system for children, the children in many cases were being educated beyond their parents. The parents, in effect, were relatively being made into children so far as their state of education was concerned and he saw the necessity and the public duty of equalizing these advantages. He also had the vision of raising the curtains of ignorance from the windows of these adults' minds and souls and giving them glimpses into the outward world of all that was beautiful and good and helpful to happiness and well-being. And so he started this system of free public lectures for adults.

The city of New York is a big city. It covers an area of 300 square miles. Distances are long in the city of New York, and

it takes much time and some money to travel from one part to another distant point. Dr. Leipziger could not found his system upon the plan of a few lecture halls centrally located to which the people whom he wished to serve — people with small means and people who reached home from work late and tired — could be expected to converge. So he arranged to take his lectures to his audiences. To do this he secured between 175 and 200 "centers" in different parts of the city — in school houses, high schools, colleges, museums, libraries, parish houses, etc.,— and in these he established courses of lectures. He organized a corps of about 800 lecturers, including experts on every possible subject, many of the men and women being distinguished in their various fields. President Wilson was at one time a member of the Lecture Corps, and other college presidents, professors and public officials gladly cooperated in the interesting work. Many of these lecturers gave their services. The ordinary fee of lecturers who were paid was only $10 a lecture,— a mere honorarium and in no sense a compensation. The subjects of the lectures covered music, literature, history, sociology, art, general and applied science, geography, political economy, government, civics, health, etc., etc. The musical lectures were accompanied by vocal, organ, piano and other music. The science lectures were demonstrated with apparatus. The great majority were illustrated with stereopticon views and many with moving pictures. The Board of Education owned the stereopticon apparatus and also provided the stereopticon operator.

The system of assignments was highly scientific and carried out with something like military precision. The lecturer usually received his assignment two or three months in advance and was required to signify his acceptance. A week before the lecture he received an inquiry asking if he were all ready for the lecture, which served as a reminder of his appointment. The lecturer repaired to the "center" at the appointed time, and found the auditorium open and lighted; a "local superintendent" in charge, the stereopticon set up, and the operator ready.

The audiences assembled averaged between two and three hundred persons. During a season from five and six thousand audiences, aggregating a million and a quarter lecture-persons, would attend these lectures.

Upon the leaflets distributed at these lectures, courses of reading were indicated, and reading clubs were organized locally in conjunction with many of the "centers."

The testimonies of appreciation evoked from the attendants on these lectures were oftentimes deeply touching, alike to the lecturer and to the Supervisor of Lectures, and proved that Dr. Leipziger's ideal had been realized.

Dr. Leipziger's thoughts were not confined to pedagogic limits. He had a broad, ethical outlook on human affairs generally, and, as another writer has said, was "a philosopher — a thinker — almost a stoic. He loved the writings of Epictetus and Marcus Aurelius and would often quote from these authors or refer to a page in their books. He seemed at times like one of the ancient peripatetic philosophers set down in our modern world as an offset to the bizarre and lackadaisical methods of present-day living."

He possessed a highly cultured soul in which ethics and aesthetics vied with one another. He loved the finer things of life — art, literature, poetry, the higher drama, philosophy and music. He loved nature and yearned for the woods and the mountains and the seashore. Hence his intense interest in the work of the American Scenic and Historic Preservation Society.

At one of the meetings of the Board of Trustees of the latter, after the outbreak of the European War, he expressed his conviction of the power of education to prevent war by quoting the following lines from Longfellow's poem on a visit to the Springfield Arsenal:

> "Were half the power that fills the world with terror,
> Were half the wealth bestowed on camps and courts,
> Given to redeem the human mind from error,
> There were no need of arsenals and forts."

Perhaps the most condensed expression of Dr. Leipziger's character was in a card, which hung over his desk in his study, and which was entitled "My Creed." It read:

> "I believe in hands that work,
> In brains that think,—
> In hearts that love."

Dr. Leipziger's funeral was held in the Temple Emanu-El, on Fifth Avenue between 43d and 44th streets, New York City, on

Monday morning, December 3, 1917. The principal speakers were Rev. Dr. Joseph Silverman and Daniel P. Hays, Esq. The interment was in Bayside cemetery.

On Saturday morning, December 8, 1917, a meeting in honor of Dr. Leipziger's memory was held in the Doremus lecture room of the Chemistry building of the College of the City of New York by members of the Lecture Corps. Dr. Edward Hagaman Hall, Secretary of this Society, presided; and short informal addresses of eulogy were delivered by Dr. Hall, Mr. Robert G. Weyh, Jr., Hon. Herbert L. Bridgman, Rev. Dr. Price, Mrs. Frances Carter, Miss Mary V. Worstell, Mrs. John J. Rooney, Prof. J. G. Carter Troup, Prof. E. F. Horne, Dr. Samuel C. Schmucker, Mr. Charles S. Brand, Mr. Herbert F. Sherwood, and others. The meeting adopted the following tribute:

"For more than a quarter of a century Dr. Leipziger inspired and guided educational evangelism. Words are inadequate to measure the value of his service to all the people or to express our admiration for his untiring effort and undaunted faith. He has enlarged the vision and developed the mental power and moral worth of every member of the community. To him education was a means, not an end, and he welcomed every agency and influence which would lead on to higher life and better citizenship. Truth, the truth which makes men free, was his ideal and inspiration, and in his quest every department of knowledge, every form of art was included. Keen sympathy, child of experience, varied and vitalized his thoughts and plans for the betterment of his fellowmen, and sincerity rang in every word and act. Educators in many and distant states recognized his work and its worth, while New York, if she would see his monument, has but to look around her upon the millions of lives raised from barren levels and set forward on those of wholesome self-respect and noble aspiration. We are too near him and the end of his active service adequately to estimate its worth or definitely to predict its future.

"Mindful, however, of his example, accepting his faith in humanity and its welfare, we pledge ourselves to cherish his memory and, quickened by it, carry on as far as in us lies this work for which he gave his life."

The following resolution, adopted by the Letchworth Park Committee of the American Scenic and Historic Preservation Society, and ratified by the Board of Trustees, expressed in part the sentiments of this Society:

"*Resolved:* That in the death of Dr. Leipziger the Letchworth Park Committee has sustained a loss which will be personally felt by every member of the Committee. His untiring and informed public spirit, his broad experience, his ample store of learning, his unselfish, philanthropic aims, his democratic American spirit, his extraordinarily successful work in helping to train American citizens by lectures in the schools of New York, and his genial, social nature, made Dr. Leipziger a distinguished citizen of inestimable value to the city in which he lived, and to his state and country, as well."

On the evening of February 26, 1918, a memorial meeting was held in the Temple Emanu-El under the auspices of the society of The Judeans. Addresses were delivered by Hon. Samson Lachman, Acting President of The Judeans, who presided; Hon. Herbert L. Bridgman, on behalf of the Regents of the University of the State of New York and the Lecture Corps of the Board of Education; Mr. Joseph L. Buttenwieser on behalf of the Hebrew Technical Institute; Prof. Charles P. Fagnani, on behalf of the Associate Alumni of the College of the City of New York and the Class of 1873; Dr. George F. Kunz, on behalf of the American Scenic and Historic Preservation Society; Hon. Louis Marshall, on behalf of the Congregation Emanu-El and the Educational Alliance; and Rev. Dr. Stephen S. Wise, on behalf of the Judeans. Miss Helen Scholder rendered a solo on the violincello, accompanied by Mrs. William V. Goldberg; and Mr. Edward Bromberg sang "Evening and Morning," accompanied by Mrs. Bromberg.

## NEW YORK STATE RESERVATIONS

There are in New York State thirty-seven properties — parks and buildings,— owned by the State which come under the description of scenic, scientific and historic monuments. The American Scenic and Historic Preservation Society is custodian of six of them. For the sake of completeness, we gave a recapitulation of all thirty-five, and will then give an accounting of our stewardship of those in our charge. They are mentioned in the order of their creation.

1849. *Washington's Headquarters,* Newburgh, comprising about six acres. Originally purchased by the Land Commissioners. Subsequently put in hands of ten Trustees appointed by the Governor.

1879. *Newtown Battlefield Reservation,* in the towns of Elmira and Ashland. Comprising about 16 acres about six miles southeast of Elmira City. Original monument erected in 1879, on plot donated by Alfred Searles. Fifteen acres additional given in May, 1912, by his daughter, Mrs. Hattie F. Elliott. Made a State Reservation by chapter 167 of the laws of 1913. Administered by five Commissioners appointed by the Governor. (See our Annual Reports for 1912 and 1913.)

1883. *Niagara State Reservation,* comprising 112 acres of land and 300 acres of land under water. Created by chapter 336 of the laws of 1883. Administered by five Commissioners appointed by the Governor. (See numerous references to this reservation in our present and former Reports.)

1885. *Adirondack Forest Preserve,* comprising 1,702,136 acres in the Adirondack Mountains. Created by a series of laws beginning with chapter 283 of the laws of 1885. Administered by the State Conservation Commission. (See historical sketch in our Annual Report for 1913, and further references in the present and other Annual Reports.)

1885. *Catskill Forest Preserve,* comprising 110,461 acres in the Catskill Mountains. Created by chapter 283 of the laws of 1885 and subsequent laws. Administered by the State Conservation Commission. (See references to Adirondack Forest Preserve above cited; to New York State Forest Preserve in our Report for 1917; and references in the present and other Annual Reports.)

1887. *Senate House, Kingston.* Purchased by the State Trustees of Public Buildings pursuant to chapter 134 of the laws of 1887. Administered by the Trustees of Public Buildings.

1892. *Fire Island State Park* on Fire Island and adjacent shore, on the south side of Long Island. Comprising about 118 acres of land originally purchased by the State in 1892 and ratified by chapter 111 of the laws of 1893, for a quarantine station. Erected into a State Park by chapter 474 of the laws of 1908. It is administered by five Commissioners appointed by the Governor.

1895. *Saratoga Battle Monument.* Schuylerville. Comprising about two acres. Accepted by the State by chapter 555 of the laws of 1895. In the custody of the State Comptroller.

1895. *John Brown Farm.* North Elba. Comprising 243 acres, given to the State by Henry Clews and others in 1895, and accepted by chapter 116 of the laws of 1896. Really a part of the Adirondack Forest Preserve. Administered by the State

Conservation Commission. (See our Annual Reports for 1908 and 1913.)

1896. *Grant Cottage,* Mount MacGregor. Not owned by the State but maintained by it, pursuant to chapter 667 of the laws of 1896. Belongs to the Mount MacGregor Memorial Association.

1896. *St. Lawrence Reservation,* comprising about 181 acres, consisting of islands in and lands along the St. Lawrence River. Created by chapter 802 of the laws of 1896. Administered by the State Conservation Commission.

*1897. *Stony Point Battlefield,* at Stony Point on the Hudson River. Comprising 35 acres. Created by chapter 764 of the laws of 1897, passed at the instance of the American Scenic and Historic Preservation Society. In the custody of this Society. (See historical sketch in our Annual Report for 1900, and references in every subsequent Report.)

1897. *Lake George Battlefield,* Caldwell. Comprising about 35 acres. Created by chapter 279 of the laws of 1897 and chapter 391 of the laws of 1900, passed at the instance of the American Scenic and Historic Preservation Society. Administered by the New York State Historical Association by designation by the Comptroller. (See description and history in our Annual Report for 1900, and later Reports.)

1900. *Palisades Interstate Park.* Comprising about 30,000 acres along the west side of the Hudson River in the States of New York and New Jersey, including what is popularly known as Harriman Park in Rockland County, N. Y. The Palisades Interstate Park was created by chapter 170 of the laws of 1900 as the result partly of the work of the American Scenic and Historic Preservation Society. Harriman Park was added by Mrs. E. H. Harriman's gift, which was accepted by chapter 362 of the laws of 1910. The property is administered by ten Commissioners appointed by the Governors of New York and New Jersey. Each Governor selects five and all ten are jointly appointed by both. (See our Annual Report for 1900 for original project, and subsequent Reports, particularly that of 1917, for description.)

1900. *Clinton House,* Poughkeepsie. Acquired pursuant to chapter 419 of the laws of 1900. In the custody of the Daughters of the American Revolution.

1903. *Spy Island,* in the town of Mexico, Oswego County. An island in Lake Ontario, comprising about one acre. Conveyed to the State, pursuant to chapter 600 of the laws of 1903, in

* In the custody of the Society.

consideration of the State making repairs in the amount of $250. It was put in the care of the Silas Town Chapter, D. A. R., by chapter 399 of the laws of 1908.

*1904. *Fort Brewerton,* in the town of Hastings, Oswego County. Consisting of one acre at the foot of Oneida Lake. Purchased pursuant to chapter 653 of the laws of 1904. In the custody of the American Scenic and Historic Preservation Society. (See our Annual Report for 1905 for history.)

1906. *Sir William Johnson Mansion and Blockhouse.* Johnstown. Purchased pursuant to chapter 681 of the laws of 1906, passed partly at the instance of the American Scenic and Historic Preservation Society. In the custody of the Johnstown Historical Society. (See our Annual Reports for 1904 and 1906.)

1906. *Watkins Glen State Reservation.* Comprising about 100 acres at the head of Seneca Lake adjacent to the village of Watkins. Created by chapter 676 of the laws of 1906 at the instance of the American Scenic and Historic Preservation Society and originally placed in its custody. It was transferred by chapter 731 of the laws of 1911 to a commission of five members appointed by the Governor. By chapter 495 of the laws of 1915 the number of Commissioners was increased to seven. (See description in our Annual Reports for 1900 and 1901; our Report for 1906 for physiography; and our Report for 1912 for change of jurisdiction.)

*1907. *Letchworth Park,* in the town of Genesee Falls, Wyoming County, and the town of Portage, Livingston County. Comprising about 1,000 acres and including the famous Portage Falls. Given to the State by William Pryor Letchworth through the American Scenic and Historic Preservation Society, and accepted by chapter 1 of the laws of 1907. In the custody of this Society. (See our Annual Report for 1907 for extended history and description.)

*1908. *Philipse Manor Hall,* Yonkers. Given to the State by Mrs. William F. Cochran, through the American Scenic and Historic Preservation Society. Accepted by chapter 168 of the laws of 1908 and placed in the custody of this Society. (See our book entitled " Philipse Manor Hall " for history, and our Annual Reports for further details.)

1909. *Saratoga Springs State Reservation.* Comprising about 100 acres, including the famous mineral springs at Saratoga. Created by chapter 569 of the laws of 1909. Administered by the State Conservation Commission.

* In the custody of the Society.

1910. *Crown Point State Reservation,* at Crown Point on Lake Champlain. Comprising 25 acres and including the earthworks and barracks of the old fort. Given to the State by Witherbee, Sherman & Co. Accepted by chapter 151 of the laws of 1910. By designation of the Comptroller in the custody of the New York State Historical Association. (See our Annual Report for 1910.)

1911. *Schuyler Mansion,* Albany. Purchased pursuant to chapters 38, 440 and 811 of the laws of 1911. Administered by ten Trustees appointed by the Governor. (See our Annual Report for 1912 for history.)

1913. *Herkimer Homestead* in Danube. Purchased pursuant to chapter 217 of the laws of 1913. Originally placed under control of German-American Alliance and Daughters of the American Revolution. In 1918, the custody was transferred by law to ten Commissioners appointed by the Governor.

1913. *Montcalm Park,* in Oswego. Originally purchased for the State Normal and Training School and forming the gardens of that institution. By chapter 610 of the laws of 1913 created a public park by the name of Montcalm Park and placed in the custody of the Fort Oswego Chapter, D. A. R.

1913. *Bennington Battlefield.* Consisting 171 acres of land at Walloomsac, in the town of Hoosick, county of Rensselaer, constituting part of the Bennington Battlefield. Purchased pursuant to chapter 716 of the laws of 1913, by the terms of which it is in the custody of the New York State Historical Association.

1913. *Cuba Lake Reservoir.* Located in Allegheny County; formerly part of the State canal system; turned over to the State Conservation Commission in 1913.

*1914. *John Boyd Thacher Park,* in the towns of Guilderland and New Scotland, Albany County. Comprising 350 acres of the beautiful Helderbergs. Given to the State by Mrs. John Boyd Thacher (a member of this Society) and accepted by chapter 117 of the laws of 1914. In the custody of the American Scenic and Historic Preservation Society. (See our Annual Report for 1914, for description.)

1914. *Lester Park or Cryptozoon Reef,* comprising about three acres in Greenfield, near Saratoga Springs. A remarkable geological formation. Given to the State by Mrs. Willard Lester in 1914. In the custody of the State Museum. (See short descriptions in our Annual Reports for 1915 and 1917.)

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* In the custody of this Society.

1915. *Clark Reservation,* in the town of De Witt, near Syracuse, comprising about 75 acres, including the Kai-wai-koe or Green Lake, and other interesting geological features. Given to the State by Mrs. Mary Clark Thompson of New York (a member of this Society) in memory of her father, Gov. Myron H. Clark. In the custody of the State Museum. (See our Annual Report for 1915.)

*1916. *Battle Island Park.* About 200 acres of land on the Oswego River in the town of Granby, Oswego County, including the historic Battle Island; given to the State by Frederick A. Emerick; accepted by chapter 308 of the laws of 1916, by which it is placed in the custody of the American Scenic and Historic Preservation Society. (See history in our Annual Report for 1916.)

1916. *Stark's Knob.* About four acres near Schuylerville, Saratoga County, including volcanic remains which are unique in New York State, and having historical associations; given to the State by Emerson McMillin, a Trustee of this Society. In the custody of the State Museum. (See brief descriptions in our Annual Reports for 1915 and 1917.)

1917. *Temple Hill.* A parcel of land about 75 feet square with the monument thereon in the town of New Windsor, Orange County, about four miles southwest of Newburgh, given to the State by the Historical Society of Newburgh Bay and the Highlands. Accepted by chapter 326 of the laws of 1917. In the custody of the Trustees of Washington's Headquarters at Newburgh. (See pages 299–302 of our Annual Report for 1917.)

1917. *Guy Park House.* A parcel of about — acres† of land with the house thereon in the City of Amsterdam, Montgomery County, originally appropriated by the State for canal purposes on or about February 14, 1907, pursuant to chapter 147 of the laws of 1903. Under the jurisdiction of the Superintendent of Public Works, who was authorized by chapter 316 of the laws of 1917 to repair and improve the property and to transfer its custody and maintenance to the Amsterdam chapter of the Daughters of the American Revolution. (See pages 329–333 of our Annual Report for 1917.)

1918. *Curtiss Game Preserve,* in the town of Volney, Oswego County, comprising 27 acres of land willed to the State by H. Salem Curtiss for a game preserve and breeding place for

* In the custody of this Society.

† Up to April 15, 1918, the area to be transferred for this purpose had not been determined.

game. Accepted by chapter 286 of the laws of 1918. Custody not indicated, but presumably in charge of State Conservation Commission. (See index of this Report for further reference.)

1918. *Mohansic Lake Reservation,* in the town of Yorktown, Westchester County, comprising about 1,100 acres of land originally acquired by the State for the Mohansic State Hospital and New York State Training School for Bays. By chapter 543 of the laws of 1918 established as the Mohansic Lake Reservation, in charge of five Commissioners appointed by the Governor. (See index of this Report for further reference.)

## Indian Reservations

In connection with the foregoing list of state reservations created for historic or scenic purposes, we append hereto a list of the Indian reservations of the state which, while not created originally for historic purposes, do possess historic interest. Fuller particulars in regard to them may be found at pages 51–52 of our Annual Report for 1916.

There are six officially recognized Indian reservations in the state, as follows:

*Allegany Reservation:* 29,829 acres situated in the southern portion of Cattaraugus county and extending from a point near the Pennsylvania line northeastward along the course of the Allegany river; and a detached tract of 640 acres in Allegany county near the village of Cuba.

*Cattaraugus Reservation:* 21,688 acres, situated in the southwest corner of Erie county, the northwest corner of Cattaraugus county, and the northeast corner of Chautauqua county and embracing an irregular tract along the course of the Cattaraugus creek from the mouth in Erie county to within about a mile of Gowanda.

*Tonawanda Reservation:* 7,550 acres situated partly in Genesee county and partly in Erie county with a small projection extending into the southeast corner of Niagara county, the general location being along the banks of Tonawanda creek.

*Tuscarora Reservation:* 6,249 acres, situated in the uplands of Niagara county, wholly within the township of Lewiston.

*Onondaga Reservation:* 6,100 acres in Onondaga county, about seven miles south of the city of Syracuse.

*St. Regis Reservation:* 14,640 acres in the northwest corner of Franklin county and the northeast corner of St. Lawrence

county with the Canadian line as the northern boundary. The northern projection of the reservation forms the Canadian Reservation of St. Regis Parish, lying at the confluence of the St. Regis river with the St. Lawrence.

## STONY POINT BATTLEFIELD

### Location and Description

Stony Point Battlefield is a State Reservation on the Peninsula of Stony Point on the west side of the Hudson river about 35 miles north of New York and 12 miles south of West Point. It is on the line of the West Shore railroad, the nearest regular station of which is Stony Point, in the village of that name, about three-fourths of a mile south of the park, but during the summer time certain trains stop at Stony Point Park itself on signal by flag or request of passengers. It may also be reached by automobiles. A visitor without heavy luggage may usually secure passage across the river from Verplanck's Point on the east side of the river by motor boat or row boat, to be hired for the purpose.

The park is in the custody of the American Scenic and Historic Preservation Society. It was created pursuant to chapter 764 of the laws of 1897. It consists of about 35 acres, or, to be precise, 33.7 acres belonging to the State and 1.16 acres belonging to the Society. Access from the nearest highway is had by means of a right-of-way 1900 feet long legally acquired by the Society for the State.

On the extreme tip of the point, about 9 acres of land belong to the United States and upon it are an ancient lighthouse tower, a comparatively modern bell tower, and the lighthouse keeper's residence. There are no roads or regularly laid out paths on the lighthouse reservation. Access to the United States reservation, when not from the river, is had through the state reservation, which lies between it and the railroad cutout of the West Shore railroad. The passage between Verplanck's Point and Stony Point is only about half a mile wide, and is the narrowest part of the river south of the Dunderberg. For this reason, among others, it was one of the most convenient places for crossing the river in Colonial and Revolutionary times and here was the famous King's Ferry, which was one of the principal means of communication between the New England and other colonies during the War for

American Independence. The rocky eminence of Stony Point was valuable from the military standpoint partly because it commanded this important ferry across the river and partly because it commanded the passage up and down the river. It was occupied alternately by the Americans and British, as the fortunes of war fluctuated, one of these exchanges being effected under circumstances which gave Stony Point a peculiar distinction in the annals of that period. That was the midnight capture of the British stronghold by the American forces under the immediate command of Gen. Anthony Wayne, and the general personal supervision of Washington on July 15–16, 1779. The sites of the Revolutionary fortifications have been accurately surveyed and marked with small stone markers, cannon and flag-poles, so that with a military map of the period, the situation at the time of the capture by the American troops can be studied intelligently.

### Stony Point Committee

The standing committee of the Society having charge of Stony Point consists of Hon. Gordon H. Peck, of West Haverstraw; Mr. Henry K. Bush-Brown of Washington, D. C.; Hon. Thomas H. Lee of Stony Point; Henry Fairfield Osborn, Sc. D., LL. D., of New York; Edward L. Partridge, M. D., of New York; Hon. Cornelius A. Pugsley of Peekskill; and the Secretary of the Society.

### Maintenance and Repairs

The Society maintains, upon the right-of-way and the reservation, a mile and a quarter of roads; various foot-paths; one keeper's house and museum of stone and wood; one old wooden cottage; five open pavilions or summer-houses of random rubble and unpainted wood which, like the keeper's house, harmonize with the scenery; ten old cannon mounted on carriages on the sites of Revolutionary fortifications, in addition to one at the memorial arch and two trophies in the museum; a row of eight concrete bath-houses on the beach; a steamboat wharf of piling, concrete and broken stone; one modern public comfort station of stone with running water; several hydrants and fountains of drinking water in different parts of the park; and various other minor accessories.

During the year 1917 only $1,111.67 was spent in maintaining the reservation. The disbursements were for the salary of the keeper; for labor in keeping paths and roads in order and patroling the beach and grounds during the summer season; the repair of the pavilion and repairs to plumbing.

### Visitors

The estimated number of visitors to the park during the year 1917 was greater than any year in the history of the reservation, exceeding even the year of the Hudson-Fulton Celebration, 1909, by over 2,000. The Society has no means for accurately counting the number of visitors, but bases its estimate upon the daily record of the number actually counted by the keeper and adding twenty-five per cent to that count to cover visitors who come and go unobserved. The estimated number of visitors for the past fourteen years has been as follows:

| *Year* | *Visitors* | *Year* | *Visitors* |
|---|---|---|---|
| 1904..... | 14,821 | 1911..... | 20,872 |
| 1905..... | 17,600 | 1912..... | 16,011 |
| 1906..... | 18,224 | 1913..... | 18,259 |
| 1907..... | 15,966 | 1914..... | 14,554 |
| 1908..... | 23,644 | 1915..... | 19,262 |
| 1909..... | 31,064 | 1916..... | 16,439 |
| 1910..... | 16,043 | 1917..... | 33,219 |

The great increase in 1917 occurred in the months of June, July and August, when the numbers of visitors were respectively 11,694, 7,836, and 7,123 respectively. The large number in June was doubtless due to the naval militia encampment on the reservation mentioned under the following heading:

### Naval Militia Encampment

On June 6, 1917, the following permit was issued to the 1st division, 4th battalion, Naval Militia of New York:

THE AMERICAN SCENIC AND HISTORIC PRESERVATION SOCIETY
THE TRIBUNE BUILDING, 154 NASSAU STREET
NEW YORK CITY

*June* 6, 1917.

Permission is hereby granted to the 1st Division, 4th Battalion, Naval Militia of New York, to have a camp on Stony Point Reservation during the year 1917, upon condition that the following rules and regulations of this reservation are complied with:

It is forbidden to destroy or mutilate trees or shrubbery;

To disturb or deface stones, rocks, landmarks, structures or other property;

To light fires except for military purposes;

To use fire arms except for military purposes, or to discharge fire works;

To use or dispense intoxicating beverages either upon the grounds of the reservation or upon vessels in the waters thereof;

To indulge in disorderly conduct or language; or to bathe without suitable garments.

Dancing and baseball playing are not allowed.

Horses must be tied at the hitching places provided and not to trees or shrubs.

Visitors are required to deposit lunch boxes, waste papers and refuse in receptacles provided.

The commanding officer of the camp is empowered to enforce these rules and in his discretion the other rules generally applying to the reservation, a copy of which is enclosed herewith.

EDWARD HAGAMAN HALL,
Secretary.

Issued to Lieut. J. G. George C. Colyer, N. M., N. Y.,
P. O. address, either Stony Point, N. Y.,
or Peekskill, N. Y.

The young men went into camp June 6 and left July 1. They were under excellent discipline and behaved with credit to themselves, their officers, and their State.

### A Disorderly Excursion Party

On August 5, 1917, we had the first experience with a disorderly excursion party in the history of the reservation.

On August 4, a permit was issued to Capt. C. T. Mallory, of No. 17 South street, New York City, in the usual form, authorizing him to land a party of about 300 ladies and gentlemen at

Stony Point from the steamer Ursula on August 5, provided he would comply with the rules of the reservation, a copy of which was given him. About 1 o'clock on Sunday afternoon, the 5th, the steamer landed about 450 persons, who paid no attention to the regulations. Soon after landing they began gambling and drinking intoxicating liquor which they brought ashore; destroyed the apple and dogwood trees, and behaved in a generally disorderly manner. When they departed about 4 p. m., they left the grounds in bad condition. When the report of the keeper of the reservation to the foregoing effect was received at the office of the Society, Capt. Mallory was promptly notified that no more landing permits would be issued to him during the remainder of the season.

### Typical Good Excursion Parties

The foregoing case, as we have said, is an exception, the excursion parties usually being well-behaved and in keeping with the established traditions of this reservation. Among the latter were the following:

June 23, 1917. Steamer Commander landed about 250 members of the Hanson Place Baptist Sunday School.

June 23, steamer Lady Hilda III landed about 75 persons.

June 30, steamer Lady Hilda III landed about 110 persons.

July 1, steamer Lady Hilda III landed about 100.

July 1, steamer Bronx landed about 100.

July 20, the Dutch Reformed church of Spring Valley brought about 110 persons in automobiles.

July 21, steamer Orient landed about 600 from the Noble Street Presbyterian church of Brooklyn.

August 15, a party from Blauvelt numbered about 75.

August 26, steamer Bronx landed about 175.

September 23, steamer Seagate landed about 500 members of the Japanese association of New York. "They were a very nice crowd of people," our keeper reported.

### Financial Statement of State Funds

Following is a statement of State moneys received and disbursed on account of Stony Point during the year ended December 31, 1917:

## *Chapter 646, Laws of 1916, Part 1.*

DEBIT

| | | |
|---|---|---|
| Appropriation | | $1,100 00 |

CREDIT

| | | | |
|---|---|---|---|
| Disbursements before reported | $483 85 | | |
| 10. Morgan L. Baisley, watchman | 2 00 | | |
| 11. Sarah G. Ten Eyck, keeper, Dec. and Jan | 100 00 | | |
| 12. Annin & Co., flag | 8 84 | | |
| 13. Sarah G. Ten Eyck, keeper, Feb., March, April | 150 00 | | |
| 14. Haverstraw Water Supply Co., to July 1, 1917 | 100 00 | | |
| 15. Alfred Demarest, plumbing | 26 09 | | |
| 16. Sarah G. Ten Eyck, keeper, May, June | 100 00 | | |
| 17. Pierre Gilleo, labor, May, June | 100 00 | | |
| 18. Warren Barton, repairs to pavilion | 23 84 | | |
| Lapsed | 4 48 | | |
| | | 1,100 00 | |

## *Chapter 181, Laws of 1917, Part 1.*

DEBIT

| | | |
|---|---|---|
| Appropriation | | $1,200 00 |

CREDIT

| | | | |
|---|---|---|---|
| 1. Sarah G. Ten Eyck, keeper, July, August | $100 00 | | |
| 2. Pierre Gilleo, labor, July, August | 100 00 | | |
| 3. Sarah G. Ten Eyck, keeper, Sept., Oct., Nov | 150 00 | | |
| 4. Pierre Gilleo, labor, Sept., Oct., Nov | 150 00 | | |
| | | 500 00 | |
| Balance with State Treasurer Dec. 31, 1917 | | $700 00 | |

## *Chapter 181, Laws of 1917, Part 3.*

DEBIT

| | | |
|---|---|---|
| Appropriation | | $300 00 |

No disbursements to December 31, 1917.

## FORT BREWERTON STATE RESERVATION

### Need of Improvement

There never was a time in the history of the United States when the inspiration of historic and patriotic landmarks was more needed than at the present time; and for this reason we have especial regret that the State has been unable, on account of the many other demands upon its treasury, to supply the means for putting the Fort Brewerton reservation in a proper state of repair.

The reservation consists of an acre of land in the town of Hastings, Oswego county, embracing the earthworks of old Fort Brewerton. It was purchased pursuant to chapter 653 of the laws of 1904 and placed in the custody of this Society. The property lies on the north side of the Oneida river about eight rods from the river. The village of Brewerton is directly opposite on the south side of the river in the county of Onondaga. The nearest railroad station is Brewerton, which is on a branch of the New York Central railroad about 13 miles north of the center of Syracuse. A bridge, forming a link in the State road (the main north-and-south highway, formerly called State street), crosses the river at this point and gives access from the village to the fort site.

A copy of the deed conveying the property to the State will be found in our Report for 1916 at pages 61–63; and a history of Fort Brewerton in our Reports for 1905 at pages 176–189 and 1914 at pages 379–404.

Since the property came into our care we have repeatedly sought from the Legislature the money with which to put it in proper order, but the limitations of the state treasury have not thus far permitted the granting of our request. In the general appropriation bill passed by the Legislature of 1916 there was an appropriation of $1,000 for "fence and pedestal," but it was vetoed by Gov. Whitman with the comment that "This item is disapproved because in view of the high market price of iron and steel, this expenditure should be deferred until next year." The next year, however, presented a financial situation even more serious than before on account of the European war and no appropriation for this purpose was made. We hope that in the near future the Legislature will provide a few thousand dollars to enable us at least to enclose the property with a fence and erect

a suitable indication that the property is historic and belongs to the State. As we said last year, the wall should be something so substantial that it will not entail constant expense for maintenance; and we recommend either a stone wall or a fence of stone posts and two lines of heavy iron pipe. As soon as possible the earthworks should be restored and the moat cleared out. Our experience at Stony Point Reservation with the remnants of Fort Wayne shows that when work is done in a solid manner, the current expense for maintenance is very small.

### Fort Brewerton Committee

The standing committee of the Society in charge of the Fort Brewerton Reservation consists of the Hon. Thomas P. Kingsford of Oswego, Hon. Thomas D. Lewis of Fulton, Hon. Thomas W. Meachem of Syracuse and Col. Thomas R. Proctor of Utica.

## LETCHWORTH PARK

### Description and Administration

Letchworth Park embraces 1,000 acres of land on the Genesee river in Livingston and Wyoming counties, and includes three miles of the Portage gorge and the three famous Portage Falls. It was given to the State by the late William Pryor Letchworth and by law is in the custody of this Society.

An extended description of the park and biography of the donor are given in our Report for 1907, and a fuller biography of Dr. Letchworth may be found in "The Life and Work of William Pryor Letchworth," by Mr. J. N. Larned of Buffalo, published by the Houghton Mifflin Co., in 1912.

The park may be reached in several ways. The nearest regular railroad station is Portage, on the Erie railroad, from which a walk across the railroad bridge at a dizzy height brings one directly into the park. There is a "flag station" within the park which is available for certain trains. Glen Iris, the administrative center of the park, may also be reached conveniently by a four mile drive southward from Castile station, on the Erie road. The Rochester branch of the Pennsylvania railroad has a "flag station" on the southeast side of the river near the Portage station on the Erie road, but it is inconvenient for access to the park,

involving a high climb to the Erie railroad bridge and the same passage across that viaduct. From Portageville (which is to be distinguished from Portage) on the Pennsylvania road, the park may be reached by a drive of three miles.

This park was given to the State of New York by Dr. Letchworth upon condition that it should be in the custody of this Society and forever be maintained as a public park. The gift was accepted by chapter 1 of the laws of 1907 and came into our actual care on Dr. Letchworth's death on December 1, 1910. It is a beautiful tract of meadows and hills, forests, river, brooks and waterfalls, deep gorges and sunny expanses, and is maintained in part by means furnished by the State of New York and in part by the residuary estate left to this Society by the donor.

### Letchworth Park Committee

The Trustees of the Society administer the park through its Letchworth Park Committee, which is composed of Mr. Wolcott J. Humphrey of Warsaw, Chairman; Hon. Herbert L. Bridgman of New York; Charles M. Dow, LL.D., of Jamestown; Mr. Francis Whiting Halsey of New York; Hon. Thomas P. Kingsford of Oswego; Mr. Ogden P. Letchworth of New York; Hon. Adelbert Moot of Buffalo; Hon. N. Taylor Phillips of New York; Hon. Robert H. Treman of Ithaca; and Charles Delamater Vail, L. H. D., of Geneva.

Dr. Dow is Director of the park, Mr. John R. Lingenfelter, Superintendent, Miss Caroline Bishop, Librarian and Curator of the Museum, and Mr. George B. Sudworth of the United States Forest Service at Washington, D. C., Consulting Forester.

### Structures, Roads, Paths and Bridges

The administration of the park has three general phases, namely, (a) care of lands, roads, paths, bridges and structures; (b) care of Arboretum and related activities; and (c) the accommodation of visitors.

Under the first of these headings, we are glad to report that notwithstanding the excessive rainfall from spring until late autumn, 1917, with the exception of August, there was not as much trouble from landslides as occurred in 1916.

Heavy storms in June, 1917, washed the roads a good deal, especially on the curves and the hill leading down from Lauterbrunnen to Glen Iris. These sections were repaired with gravel, but it is hoped that eventually we may be able to pave some of the curves on the steep grades so as to eliminate future trouble of this sort.

Much attention was given in 1917 to the guard rails. A substantial guard rail of wood was erected at the Upper Fall and the guards to the stairway leading up the steep hillside to the Erie railroad were repaired. The guard rail along the path to the Mineral Spring at the Middle Fall was extended; and a guard rail was erected at the Red Pine grove below Inspiration Point. The path leading to Table Rock at the Lower Fall was set back so that visitors to that attractive spot will not have to go so near the edge of the precipice as heretofore.

A great deal of work of a general nature was done in the way of repairs to culverts, walls, paths, bridges, etc.; the removal of trees blown down in storms; the construction of a new drain in the Glen Iris basement; the installation of a new furnace in the Museum basement for heating the library; the painting of the interior walls of the Museum, etc., etc.

Further particulars in regard to structures are given under following heads.

In June and July the hay crop was harvested on shares by farmers from the neighborhood.

### Museum and Library

During the last week of August the walls of the hall and rooms on the main floor of the Museum Building were painted a pleasing buff color, the ceilings a little lighter than the side walls, and both in harmony with the chestnut wood with which the rooms are finished. The appearance of the rooms is greatly improved by this treatment.

The cold, rainy season of 1917 made it apparent that a heating plant for the Museum building was a necessity, both for comfort and to keep mildew from the books, and in October a hot air furnace was installed in the basement.

The usual number of reports from charitable institutions was added to the library in 1917.

A valuable addition to the Museum was a deer's head, mounted and well preserved, which was presented to the Museum by Mrs. Julia L. Eastwood of Bay City, Michigan. Mrs. Eastwood said that the deer was killed on a very cold day just outside of Bay City in 1876. She evidently made a considerable sacrifice in removing the specimen from her home, for she wrote that she knew of no other place than the Letchworth Park Museum in which she would be willing to place it.

An interesting archaeological collection was presented by Mr. Edgar D. Wells of Nunda, N. Y. This includes a fine specimen of a banner stone which was found by Mr. Latham Coffin on his farm in the town of Portage, in an Indian chief's grave, about the year 1887. Forty-one fine notches are cut in the lower edge of the stone.

Among the arrow heads in this collection is one of rose quartz, which was found on Mr. Platt C. Halstead's farm in the town of Portage, in the spring of 1917.

### Davis Cottage Burned

In our last Annual Report, at pages 99–104, we recorded the purchase by this Society of the Davis property lying in the heart of the park. On June 4, 1917, the old wooden cottage on this lot was destroyed by fire. The house had a long, slanting roof on one side and a short time before the fire started several soldiers of the 74th Regiment Infantry, N. G. N. Y., stationed near the Park were seen sliding on the roof. When the fire was discovered it had gained such headway that the laborers were unable to save the structure and turned their attention to removing furniture which had been stored there by Mr. Baeder, the manager of Glen Iris Mansion, preparatory to putting the house in order for the accommodation of some of his employees. The débris has been cleared away and part of the grading and filling in has been accomplished.

### First New York Dragoons Monument Moved

During the fall of 1917, the First New York Dragoons monument, which formerly stood on the south side of the Genesee river near the highway leading from the Portage station of the Erie railroad to the village of Portageville, was moved across the river into Letchworth Park and re-erected on the small triangle formed by the intersection of the roads from Castile, Glen Iris and the Lower Fall.

The monument is of granite in the form of an obelisk with pyramidal top, standing on a cubical plinth and terraced base. The base is eight feet square and the total height of the monument is 33 feet 4 inches.

On the west side of the shaft are two crossed cavalry swords. On the plinth and base are the following inscriptions:

(West side)

First
New York
Dragoons
Volunteers
1862–1865.
Allegany Livingston and Wyoming Counties
Erected in 1903
By the Survivors and Friends of the Regiment.

(North side)

Participated in 65 Battles
Engagements and Skirmishes
Captured 1533 Prisoners, 19 Pieces
of Artillery and 4 Battle Flags.
As Infantry in 7th Army Corps
As Cavalry with Sheridan.

(East side)

Organized July 25, 1862, as
30th Senatorial Dist. Regt. N. Y. Vols.
Mustered Sept. 2, 1862, as
130th New York Vol. Infantry
Converted into Cavalry, July 28, 1863
Designated August 11, 1863
19th New York Cavalry
Designation Changed Sept. 10, 1863 to
First New York Dragoons
Mustered out June 30, 1865

(South side)
Enrolled Membership 1414
461 Killed and Wounded.
131 Died of Disease
33 Died in Confederate Prisons
130 Killed or Died of Wounds.
Sustained at Todd's Tavern the Heaviest
Loss of any Cavalry Regiment in any
One Action During the War.

The plot of ground on which the monument formerly stood was donated for the purpose by Mrs. Charlotte Pattison, who lives near Portage station. The original cost of the monument, to the extent of $1,000, was borne by Dr. De Villo W. Harrington, a member of the regiment, then living in Buffalo, and Mr. Rufus C. Jefferson, also a member, residing in St. Paul, Minn., each giving $500, as we are informed, and the remainder was raised by voluntary contributions from surviving members of the regiment and their friends. The total original cost was about $3,000. The monument was dedicated August 27, 1903, on the occasion of the 34th annual reunion of the regiment. We are informed that Dr. Harrington designed the monument.

The original incorporators of the monument association were De Villo W. Harrington, M. D., of Buffalo, Homer O. Holly of Warsaw, Rufus C. Jefferson of St. Paul, Minn., Col. Abram B. Lawrence of Warsaw, Robert Rae, M. D., of Portageville, and E. Randolph Robinson of Fair Haven.

The original monument committee consisted of D. W. Harrington, M. D., Chairman and Treasurer; A. Aldrich, G. A. Gearhart, Judge E. W. Hatch, H. O. Holly, Rufus C. Jefferson, William Kramer, Col. A. B. Lawrence, Hon. William Pryor Letchworth, M. W. Norton, C. Pettibone, George Putnam, Robert Rae, M. D., E. R. Robinson, A. K. Ryno, W. W. Tadder and James Thornton.

The task of moving the monument to Letchworth Park in 1917 was a difficult one, as the memorial had to be taken down stone by stone with great care, hauled to Portage station, loaded on freight cars, transported across the gorge on the Erie viaduct, unloaded, hauled to the new site, and re-erected on a new foundation. The work was done by McDonnell & Sons, Inc., of Buffalo. The State appropriated $700 for the purpose, but on account of the difficulty in hiring and retaining workmen, and other com-

plications due to the war, the actual cost of moving the monument and putting it up again was $1,227.83, "without adding one dollar for any overhead expenses or additional profit of any kind — just the money that we have actually paid out of our own pockets," the contractors informed us. The work of removal began in the latter part of October, 1917, and the shaft was lowered upon its base November 15.

The Hon. Edward W. Hatch of New York, Chairman of the Soldiers' Committee, who cooperated with this Society most helpfully in moving the monument, gives us the following memorandum concerning its history:

"The Regiment was organized at Portage in August, 1862, and mustered into service September 2, 1862. My father raised Company F in Allegany County, became its captain, and was mustered in with the regiment. It entered upon actual service at Suffolk, Virginia, and was there during the siege of Suffolk by Longstreet, and so remained until after the battle of Chancellorsville. It was mustered in as the 130th New York Volunteer Infantry, and Col. Gibbs, a regular army officer, was placed in command of the regiment. Col. Fuller, who, it was expected, would be its Colonel, had resigned upon its arrival at Suffolk. Col. Gibbs had been a cavalry officer, and through his influence the regiment was changed from infantry to cavalry and given the name of the First New York Dragoons, and in numerical order is also known as the 19th New York Cavalry.

"It is one of the most distinguished regiments of the war. After being mounted, it was attached to Devens Brigade, which was known for some time as the 'Reserve Brigade,' under the command of General Wesley Merritt, General Torbert being the Division Commander. It participated in all of the raids under General Sheridan, which carried it twice around Richmond, and once into the outer fortifications of that place, and subsequently was with Sheridan in the campaigns of the Shenandoah Valley. At the close of the war, it participated in the Grand Review at Washington.

"There is a history of the Regiment written by James R. Bowen.

"The actual camp of the Regiment at the time of its muster into the service was about two miles northeast of the station at Portage. From the present location of the monument, looking directly east, lies the camp where the regiment assembled. Some trees interpose to prevent a view of it from the site of the monument but from Inspiration Point in the park a complete view can

be obtained. This was one of the reasons why this spot was chosen for its location."

The Honorable Adelbert Moot of Buffalo, a member of our Letchworth Park Committee, gives the following reminiscence concerning the First Dragoons:

"As a small boy, in the early days of the Civil War, I knew many members of that distinguished regiment, several of its members being men who left my father's farm to fight for our Government in its time of need. Several of those men died of disease or wounds, or were killed in battle. After the brilliant battle of Cedar Creek, the New York Tribune mentioned the First New York Dragoons as particularly distinguishing themselves above most, if not all, other regiments in Sheridan's army. It is exactly in accord with the aims of the Society that such a monument to such a regiment should be included within the park, and it is particularly fitting in this case because the regiment was raised in the three counties that surround the park, and were drilled and went to the front from just across the river."

### Arboretum and General Planting

The Arboretum work in 1917 was prosecuted along the established lines and was very successful.

In April, 1917, blocks Nos. 1, 3, 4, 11 and 32 on the north side of the road leading to the labor center were filled with Jack Pine, Austrian Pine, Norway Spruce and Engelman Spruce transplants and White Pine seedlings. During the month, the following plants were received from the Department of Agriculture, Yarrow station, Rockville, Md.: 3 Juniperus chinensis, 5 Tamarix pentandra, 3 Ulmus densa, 5 Castanea mollissima, and 6 Ulmus pumila.

On May 8, machine planting operations began and continued until June 1. About 66,000 trees were planted. Before planting the trees were dipped in a solution of muck. It was necessary to plant the Jack Pines by hand on account of their size. A good deal of transplanting in the nursery was also done.

The machine planting above referred to, first practiced in 1916, is done by means of a machine which can plant from 10,000 to 15,000 seedlings a day. Previously the planting had been done by hand at the rate of 1,200 to 1,500 trees each day per man.

The machine was designed to set out cabbage and tomato plants, but works equally well with trees. It is about the size of an ordinary mowing machine and is operated by three men and two horses. One man drives the team while the other two handle the seedlings. The machine makes a furrow in which the trees are set at any desired distance, and an automatic device indicates where they should be dropped. Two metal tired wheels push and roll the dirt firmly down around the roots. This is a very desirable feature because the trees are apt to die if this is not well done. Two attachments make it possible to place water and fertilizer at the roots of each seedling. Another attachment marks the line on which the next row of trees is to be planted.

In June, the planting in blocks 38, 39, 40 and 41 was completed. Many trees that were blown over by strong winds were straightened and retamped, and very few of them were lost. A great deal of work on seed-beds was also done during this month. Owing to rainy weather, there was a prolific growth of weeds and grass and much labor was bestowed on their removal.

The copious and frequent rains in the early part of July kept the earth so wet that work with the cultivators was difficult.

In general, the old plantings are doing well, except the White Pines which have been attacked by borers. The tops of the affected pines were cut off and burned, which was about all that could be done to combat the pest.

The Cedrus deodar which had been frozen badly during the winter of 1916–17 recovered very well during 1917 and is making good growth.

By the fall of 1917, the plants in the nursery were in good condition and the expectation that they would pass a good winter has been realized.

In April, 1917, a portion of the land along the Erie railroad was planted with trees removed from blocks 38, 39, 40 and 41 of the Arboretum.

In July, arbor vitae plants were set out on the lawn in front of the Glen Iris porch.

In September, the planting between Lauterbrunnen and Inspiration Point, the planting in the section opposite the Maria Davis garden and the planting in the plot above the Council House grounds formerly occupied by the old orchard was finished.

The plot of ground to the southwest of Prospect Home (the labor center) was planted with 1800 Red Pine, Arbor Vitae, Lawson Cypress, Engelman Spruce, Austrian Pine and Jack Pine.

A large number of trees were transferred from the forest and 3300 nursery trees were planted in blocks in the fall of 1917.

### Visitors to the Park

Public accommodations for visitors are provided at the Glen Iris mansion, Dr. Letchworth's former residence, which is also the administrative center of the park and general focus of interest. The mansion was publicly opened May 20, 1917, and closed October 14, having been managed, as in former seasons, by Mr. Charles Baeder, proprietor of the Big Tree Inn at Geneseo. His charges for meals and lodgings and the general conduct of the house are regulated by this Society.

At Prospect Home, the labor center, a garage which will accommodate eight automobiles was established in July and August, 1917. We utilized for that purpose the long shed attached to the barn and erected no new building. The boarding house at Prospect Home furnishes meals and lodgings for chauffeurs and thus relieves the Glen Iris mansion of the necessity of accommodating them.

Following is a statement of the number of guests entertained at the Glen Iris mansion during the summer of 1917:

| | Breakfast | Dinner | Supper | Lodging |
|---|---|---|---|---|
| May | 70 | 171 | 114 | 79 |
| June | 235 | 484 | 351 | 251 |
| July | 300 | 811 | 468 | 276 |
| August | 432 | 1260 | 716 | 427 |
| September | 328 | 793 | 452 | 309 |
| October | 110 | 140 | 105 | 94 |
| | 1475 | 3659 | 2206 | 1436 |

The number of visitors to Letchworth Park attests its growing popularity, which increases as the attractiveness of this exceptionally beautiful spot becomes more widely known.

On April 15, Mr. Albert N. Habberley of the Metropolitan Park system of Boston, Mass, visited the park and expressed his delight with it.

A party of nine ladies — all nature-lovers — came from Binghamton in June and spent several days at the park, their primary object being to observe and study the birds, but like most of the days in June, 1917, it rained incessantly, and there was but little opportunity to study out of doors. Miss Bishop, the Curator of the Museum, takes special pains to make the visits of those studying natural history interesting.

It may be mentioned here that under Miss Bishop's direction signs intended to protect the wild flowers were prepared last season and were posted last fall and early this spring, reading as follows:

"Add to your enjoyment of the wild flowers the pleasure of leaving them unplucked for others to enjoy."

On July 4, 1917, there was a large attendance at the park. The park was well policed; everybody was in good humor and there were no mishaps. Two hundred automobiles were counted at one time on the Glen Iris grounds.

On July 26, State Highway Commissioner Edwin Duffey spent the day and night at the park and conferred with Chairman Humphrey and Director Dow in regard to road development in that section. Mr. Humphrey and Dr. Dow were much impressed with Commissioner Duffey's appreciation of the road situation, not only here but in other parts of the State. He appeared to be in sympathy with our plan for a State road from Portageville and one from Castile connecting with the main State highway. We are also pleased to learn of his plans for developing roadways to scenic and historic points throughout the State and marking historic places so as to attract travelers.

On September 18, Rev. John Grier Hibben, Ph. D., LL. D., L. H. D., President of Princeton University; Capt. Radcliffe Dugmore of the British army; Mr. Cass Gilbert, the famous architect of New York City, and Prof. Herbert E. Mills of Vassar College, Poughkeepsie, were entertained at luncheon at Glen Iris, all except Dr. Hibben remaining over night.

Considering the large number of visitors to the park, very little damage is done. Occasionally, however, there is an exception, due either to ignorance, lack of appreciation or wilfulness. One such case occurred on July 13, 1917, when the superintendent arrested

Charles H. Noeb of Buffalo for pulling up and carrying away two evergreen trees from the Arboretum. Before the Justice of the Peace at Castile, Noeb pleaded that he thought he had a right to take the trees, which he intended to plant on his lawn in Buffalo. At the solicitation of some clergymen who were camping at Silver Lake and who attested to Noeb's good character, he was discharged with a reprimand.

### Letchworth Memorial Association

The fourth annual meeting of the William Pryor Letchworth Memorial Association was held in the park on Saturday, May 26, 1917, the anniversary of Dr. Letchworth's birth. It was a beautiful day and many relatives and friends of the donor of the park were present.

The Hon. Charles M. Dow of Jamestown, President, presided at the business meeting in the morning, at which the following officers were elected for the ensuing year:

President — Mr. Wolcott J. Humphrey of Warsaw.

Vice-Presidents — Mr. Edward H. Letchworth of Buffalo and Miss Mary T. Greene, M. D., of Castile.

Secretary and Treasurer — Mr. C. K. Sanders of Nunda.

Executive Committee — Hon. Lockwood R. Doty of Geneseo, Mr. Henry R. Howland of Buffalo, Mr. A. O. Bunnell of Dansville, Miss Isabel Howland of Aurora and Miss Caroline Bishop of Letchworth Park.

At 2 p. m. public exercises were held on the commanding projection of the rim of the gorge called by Dr. Letchworth "Inspiration Point." Dr. Dow, President of the Memorial Association, presided. Dr. Charles Delamater Vail of Geneva opened the exercises with prayer, and later made an extemporaneous address. The principal speaker was Hon. Charles Barker Wheeler, Justice of the Supreme Court, of Buffalo. Other speakers in order were Mr. Wolcott J. Humphrey of Warsaw, Mr. A. O. Bunnell of Dansville, Hon. Adelbert Moot of Buffalo, Senator John Knight of Arcade, Mrs. Joseph Leeming of Buffalo, Charles M. Dow, LL. D., of Jamestown, Mr. Edward H. Letchworth of Buffalo, Miss Susan Pearl Darling of Buffalo, Miss Frances A. Judson of Castile, Mr. C. K. Sanders of Nunda, Mr. Fred Norris of War-

saw, Mr. Truman L. Stone of Sonyea, Mrs. Charles B. Wheeler of Buffalo, Miss Isabel Howland of Aurora, Mr. S. L. Strivings of Castile, Miss Caroline Bishop of Letchworth Park and Edward Hagaman Hall, L. H. D., of New York.

During the exercises, a boulder and tablet were unveiled. (See plate 48.) The bronze tablet bears the following quotation from a poem entitled "Inspiration Point" written in 1909 by Mrs. Pierre E. Letchworth of Covina, Cal.:

> "God wrought for us this scene beyond compare;
> But one man's loving hand protected it
> And gave it to his fellowmen to share."

The allusion, of course, is to Dr. Letchworth who acquired, restored and preserved Letchworth Park and gave it to the State for everybody's enjoyment. The tablet was unveiled by Miss Howland and Miss Bishop.

### Fatal Automobile Accident

We are pained to record the first fatal accident in Letchworth Park, which occurred about 5.45 p. m. on August 10, 1917. A five passenger Buick automobile containing nine adults and two children, driven by John Torrey of Gainesville, went over the cliff a little below the Upper Fall. Mr. and Mrs. Franklin B. Powers of Youngstown, Ohio, who were within 150 feet of the car when it went over the bank, witnessed the accident. It appears from their testimony, that the car, instead of keeping to the roadway at the turn, went 24 feet in a straight line from its course, tore away a tree 1 foot 8 inches in circumference and 24 feet 8 inches high, and plunged down to the rocks of the river, 47 feet below. Miss Ethel Tomovitch of Rochester was instantly killed and the others variously injured. Mr. and Mrs. Powers gave the alarm, and doctors and nurses were summoned from Castile and Warsaw. Mr. Humphrey, Chairman of our Letchworth Park Committee, also hastened to the scene from Warsaw, and everything possible was done for the care of the injured. The most seriously hurt were taken to the hospital at Warsaw, where Miss Grace Dillon subsequently succumbed to her injuries.

Since Letchworth Park became the property of the State, the number of visitors by automobiles has greatly increased. Many

of the chauffers are inexperienced, careless, ignorant or overventuresome and these shortcomings are especially unfortunate with those who come from sections where steep and crooked roads are not common. With these facts in mind, we have decided to exclude automobiles from two view-points near the cliffs and also to make some changes in the layout of roads in the interest of further safety. We have already set the driveway near the Upper Fall farther back from the edge of the cliff, and Inspiration Point, between the Middle and Lower Falls, has been set aside for pedestrians only.

### Meteorological Report

Following is a record of the meteorological conditions at Letchworth Park for the year ended December 31, 1917, as observed at the United States Meteorological Station established in the park at Lauterbrunnen, at an elevation of 1,260 feet above sea level:

| | Jan. | Feb. | Mar. | April | May | June |
|---|---|---|---|---|---|---|
| Mean maximum temperature | 30.5 | 27.8 | 38.2 | 53.6 | 57.9 | 72.5 |
| Mean minimum temperature | 13.3 | 8.1 | 22.2 | 34.3 | 3.8 | 52.7 |
| Mean temperature | 21.9 | 17.9 | 30.2 | 43.9 | 30.7 | 31.3 |
| Maximum temperature | 45 | 49 | 68 | 78 | 81 | 88 |
| Minimum temperature | –9 | –15 | 8 | 19 | 56 | 62 |
| Precipitation, inches | 0.58 | 0.66 | 0.32 | 1.12 | 4.09 | 5.43 |
| Days of over .01 in. precipitation | 15 | 11 | 4 | 6 | 9 | 9 |
| Snow fall, inches | 12.2 | 5.5 | 7 | 5 | T | ..... |
| Clear days | 5 | 1 | 13 | 14 | 13 | 13 |
| Days partly cloudy | 11 | 17 | 8 | 9 | 7 | 14 |
| Days cloudy | 15 | 10 | 6 | 7 | 11 | 3 |

| | July | Aug. | Sept. | Oct. | Nov. | Dec. |
|---|---|---|---|---|---|---|
| Mean maximum temperature | 72.9 | 71.5 | 65.6 | 53.6 | 44.8 | 29.8 |
| Mean minimum temperature | 59.1 | 52.9 | 45.2 | 35.0 | 25.6 | 9.9 |
| Mean temperature | 66.0 | 62.2 | 44.4 | 25.7 | 35.2 | 19.9 |
| Maximum temperature | 89 | 88 | 82 | 69 | 55 | 51 |
| Minimum temperature | 73 | 73 | 25 | 47 | 5 | –15 |
| Precipitation, inches | 4.79 | 2.97 | 30.9 | 6.89 | 0.82 | 1.65 |
| Snow fall, inches | ..... | ..... | ..... | 3 | 2 | 16 |
| Days of over .01 in. precipitation | 6 | 5 | 5 | 13 | 2 | 5 |
| Clear days | 17 | 20 | 16 | 4 | 9 | 6 |
| Days partly cloudy | 10 | 8 | 14 | 14 | 12 | 10 |
| Days cloudy | 4 | 3 | 0 | 13 | 9 | 15 |

In the foregoing, precipitation includes rain, melted snow, hail and sleet. "T" stands for "trace." The observer makes the following special remarks on the different months:

*January.* Was very disagreeable on account of the very strong winds which drifted the snows and blocked the roads badly and which made the traveling very difficult. Frequent snow squalls. Harvesting good ice 12 inches thick.

*February.* Robins appeared on the 26th of the month. Much cloudy weather. Very little snow fall. Ice left the river on the night of the 26th with a moderate flow of water. Roads still blocked with snow. Prevailing direction of wind for month was southwest.

*March.* Ground still covered with snow. On the 5th 7 inches of snow fell with high west winds. River open and free from any dangerous ice blockades with a good flow of water. Prevailing direction of the wind for the month west. Heavy sleet on 14th, but did not damage the trees.

*April.* On the 5th 5 inches of snow fell, but this all disappeared on the 8th. Farmers plowing for spring crops. A large acreage of potatoes planted for early market. Buds on the trees in the park swelling very fast and some trees in full leaf. Prevailing direction of wind during month west.

*May.* Month free from any killing frost. Plowing and preparing the land for the planting of trees in the Arboretum. Preparing seed beds in the nursery. Farmers busy plowing and sowing oats and getting the land ready for beans and late potatoes. Prevailing direction of wind for month northwest. Roads very muddy.

*June.* Very wet. Planting of farm crops backward as the land was too wet to work on. Roads very bad. Storms on the 7th, 18th, 23d and 26th. Hail on the 20th. Finished planting trees in Arboretum.

*July.* Farmers harvesting hay, much of which was damaged by excessive rainfall. Wheat and rye ripening nicely. Other crops looking good and promising. Frequent thunder storms. Prevailing direction of the wind for the month west.

*August.* Weather conditions much better this month, but nights very cold. Roads in good shape. Considerable rain in latter part of month. Harvesting wheat and rye. Thunder storms on the 13th, 14th, 18th and 29th. Prevailing direction of the wind for the month east.

*September.* First 15 days very good weather with little rain. Farmers harvesting beans and potatoes. Frost on the 23d, 24th and 25th, which damaged the beans to a great extent. Complaints of the potatoes rotting in ground. Prevailing wind for the month west.

*October.* A very wet month. Eighteen days of rain did much damage to farm crops, as they could not be housed. Frost on the 2d, 7th, 9th, 14th, 15th and 16th. Snow on the 12th, 13th, 23d, 24th, 30th, 31st. Prevailing wind for the month west.

*November.* First half of month very good. A great quantity of beans and potatoes were gotten under cover. Beans being thrashed and showed great loss by being damaged by early frost. Month very cold. River frozen over on the 26th. Ground frozen to a depth of 7 inches. Roads in good condition. Stock looking well. Prevailing direction of wind for the month west.

*December.* Much snow fall. Greatest amount of fall on the 8th with 7 inches. On the 14th there was 13 inches of snow on the level. On the 9th the roads were badly drifted. Cutting ice on the river, 7 inches thick at the town of Portageville. Prevailing direction of wind for month west.

## Letchworth Legacy

The Letchworth Legacy consists of the cash and securities which, with the physical property, constituted the residuary estate left to the Society by the late William Pryor Letchworth, donor of Letchworth Park. It is applicable exclusively to the maintenance and improvement of Letchworth Park. As this fund belongs to the Society, its accounting for the year 1917 is given with that of other Society funds at page 51 of this Report.

## Financial Statement of State Funds

Following is a statement of State moneys received and disbursed on account of Letchworth Park during the year ended December 31, 1917:

## *Chapter 727, Laws of 1915*

DEBIT

| | | |
|---|---|---|
| Appropriation | | $11,000 00 |

CREDIT

| | | | |
|---|---|---|---|
| Disbursements before reported | | $6,395 81 | |
| 71. | Castile Hardware Co., paint | 110 37 | |
| 72. | Castile Hardware Co., stove pipe, etc. | 15 78 | |
| 73. | Elitsac Mfg. Co., lumber and hardware | 45 13 | |
| 74. | Elitsac Mfg. Co., lumber and hardware | 8 40 | |
| 75. | Elitsac Mfg. Co., lumber, cement, etc | 65 84 | |
| 76. | Elitsac Mfg. Co., chain, etc | 6 45 | |
| | Lapsed and reappropriated in 1917 | 4,352 22 | |
| | | | 11,000 00 |

## *Chapter 646, Laws of 1916, Part 1*

DEBIT

| | | |
|---|---|---|
| Appropriation | | $7,270 00 |

CREDIT

| | | | |
|---|---|---|---|
| Disbursements before reported | | $2,233 23 | |
| 54. | James O. Howard, superintendent, December | 125 00 | |
| 55. | Palmer J. Strickland, foreman | 60 00 | |
| 56–63. | Laborers | 238 66 | |
| 64. | N. Y. Telephone Co., October 21–November 20, 1916 | 5 80 | |
| 65. | Castile Hardware Co., gasoline | 4 75 | |
| 66. | Castile Hardware Co., oil, etc | 3 64 | |
| 67. | M. A. Hopkins & Son, bran | 19 90 | |
| 68. | James O. Howard, superintendent, January | 125 00 | |
| 69. | Palmer J. Strickland, foreman | 60 00 | |
| 70–76. | Laborers | 143 50 | |
| 77. | Charles M. Dow, traveling expenses | 10 83 | |
| 78. | James O. Howard, disbursements | 9 25 | |
| 79. | Charles M. Dow, telephone, etc | 8 61 | |
| 80. | N. Y. Telephone Co., January service and tolls | 6 65 | |
| 81. | Elitsac Mfg. Co., freight, etc | 5 32 | |
| 82. | James O. Howard, superintendent, February | 125 00 | |
| 83. | Palmer J. Strickland, foreman | 60 00 | |
| 84–92. | Labor | 260 72 | |
| 93. | James O. Howard, telegrams | 1 49 | |
| 94. | N. Y. Telephone Co., February service and tolls | 8 55 | |
| 95. | James O. Howard, paid for grass seed, etc. | 35 37 | |
| 96. | John E. Eddy, coal | 39 57 | |
| 97. | John E. Walker, stable blankets | 19 00 | |

| | | | |
|---|---|---|---|
| 98. | Wilson A. Bennett, blacksmithing | $15 05 | |
| 99. | J. R. Lingenfelter, superintendent, March | 125 00 | |
| 100. | Palmer J. Strickland, foreman | 60 00 | |
| 101–103. | Laborers | 125 00 | |
| 104. | N. Y. Telephone Co., March service and tolls | 10 30 | |
| 105. | J. R. Lingenfelter, postage, etc | 2 97 | |
| 106. | Floyd A. Lindsay, hauling ice | 16 10 | |
| 107. | J. B. Lyon Co., printing | 5 50 | |
| 108. | J. R. Lingenfelter, superintendent, April | 125 00 | |
| 109. | Palmer J. Strickland, foreman | 60 00 | |
| 110–113. | Laborers | 378 00 | |
| 114. | N. Y. Telephone Co., April service and tolls | 6 30 | |
| 115–116. | J. R. Lingenfelter, traveling expenses, self and men | 35 43 | |
| 117. | J. R. Lingenfelter, notary fee, postage, etc. | 5 77 | |
| 118. | N. Y. Telephone Co., May service and tolls | 8 90 | |
| 119. | H. J. Fuller Estate, hardware, etc | 17 80 | |
| 120. | John R. Lingenfelter, superintendent, May | 125 00 | |
| 121. | Palmer J. Strickland, foreman | 60 00 | |
| 122–124. | Labor | 517 00 | |
| 125. | John R. Lingenfelter, traveling expenses | 21 36 | |
| 126. | E. H. Hall, traveling expenses | 23 42 | |
| 127. | John R. Lingenfelter, postage, etc | 4 00 | |
| 128. | Oliver A. Quayle, printing | 4 60 | |
| 129. | B. W. Jones, plowing | 110 50 | |
| 130. | Ewart & Lake, fodder | 56 00 | |
| 131. | John R. Lingenfelter, superintendent, June | 125 00 | |
| 132. | Albert C. Lingenfelter, foreman | 60 00 | |
| 133. | John R. Lingenfelter, laborers | 387 32 | |
| 134. | N. Y. Telephone Co | 10 90 | |
| 135. | Charles M. Dow, telegrams, etc | 10 15 | |
| 136. | John R. Lingenfelter, traveling expenses | 11 03 | |
| 137. | John E. Eddy, coal | 15 00 | |
| 138. | Ewart & Lake, feed | 211 00 | |
| 139. | John R. Lingenfelter, laborers | 251 25 | |
| 140–141. | Charles M. Dow, telephone and travel | 38 04 | |
| 142. | N. Y. Telephone Co., May 21–June 20 | 22 55 | |
| 143. | T. G. Fields, whip | 1 00 | |
| | Lapsed | 597 72 | |
| | | | $7,270 00 |

*Chapter 646, Laws of 1916, Part 3*

DEBIT

| | |
|---|---|
| Appropriation | $1,000 00 |

CREDIT

| | | | |
|---|---|---|---|
| Disbursements before reported | | $61 65 | |
| 4. | Castile Hardware Co., hardware | 15 28 | |
| 5. | Geo. E. Washburn, filing saws, etc | 2 75 | |

| | | | |
|---|---|---|---|
| 6. | F. A. Fuller, harness | $3 10 | |
| 7. | Green Hardware Co., lawn mowers, etc | 35 93 | |
| 8. | T. G. Fields, cultivators | 80 00 | |
| 9. | Elitsac Mfg. Co., planting trays | 31 34 | |
| 10. | W. A. Bennett, blacksmithing | 20 45 | |
| 11. | John E. Walker, hardware | 7 10 | |
| 12. | Webster-Case Hardware Co., furnace, etc | 297 93 | |
| 13–15. | Laborers | 80 41 | |
| 16. | Lyman Bishop, building sand | 4 00 | |
| | | | $639 94 |
| | Balance with State Treasurer, December 31, 1917 | | $360 06 |

## *Chapter 181, Laws of 1917, Part 1*

DEBIT

| | |
|---|---|
| Appropriation | $7,820 00 |

CREDIT

| | | | |
|---|---|---|---|
| 1. | John R. Lingenfelter, superintendent, July | $125 00 | |
| 2. | Albert C. Lingenfelter, foreman | 60 00 | |
| 3. | Caroline Bishop, librarian | 66 67 | |
| 4–5. | Laborers | 367 50 | |
| 6. | N. Y. Telephone Co | 3 75 | |
| 7. | John R. Lingenfelter, travel, etc | 16 30 | |
| 8. | John R. Lingenfelter, superintendent, August | 125 00 | |
| 9. | Albert C. Lingenfelter, foreman | 60 00 | |
| 10. | Caroline Bishop, librarian | 66 67 | |
| 11–13. | Labor | 341 00 | |
| 14. | John R. Lingenfelter, travel expenses | 12 72 | |
| 15. | John R. Lingenfelter, postage, etc | 2 58 | |
| 16. | N. Y. Telephone Co., June 21–July 20 | 7 35 | |
| 17. | F. A. Fuller, harness | 6 40 | |
| 18. | John R. Lingenfelter, superintendent, September | 125 00 | |
| 19. | Albert C. Lingenfelter, foreman | 60 00 | |
| 20. | Caroline Bishop, librarian | 66 67 | |
| 21–25. | Labor | 342 44 | |
| 26. | N. Y. Telephone Co., September service and tolls | 12 00 | |
| 27. | John R. Lingenfelter, traveling expenses | 14 26 | |
| 28. | Oliver A. Quayle, printing | 2 15 | |
| 29. | W. A. Bennett, farrier | 29 70 | |
| 30. | John R. Lingenfelter, superintendent, October | 125 00 | |
| 31. | Albert C. Lingenfelter, foreman | 60 00 | |
| 32. | Caroline Bishop, librarian | 66 67 | |
| 33–35. | Labor | 230 74 | |
| 36. | N. Y. Telephone Co., October service and tolls | 16 25 | |
| 37. | N. Y. Telephone Co., November service and tolls | 7 40 | |

| | | | |
|---|---|---|---|
| 38. | Ewart & Lake, feed | $226 59 | |
| 39. | J. E. Joyce, hay | 144 00 | |
| 40. | Robert H. Scott, veterinary | 7 00 | |
| 41. | John R. Lingenfelter, traveling expenses | 11 91 | |
| 42. | John R. Lingenfelter, superintendent, November | 125 00 | |
| 43. | Albert C. Lingenfelter, foreman | 60 00 | |
| 44. | Caroline Bishop, librarian | 66 67 | |
| 45–48. | Labor | 125 34 | |
| 49. | F. H. Bentley, dynamite, etc | 78 35 | |
| 50. | John E. Eddy, fuel | 104 08 | |
| 51. | John R. Lingenfelter, postage | 2 00 | |
| 52. | Oliver A. Quayle, printing | 4 00 | |
| | | | $3,374 16 |
| | Balance with State Treasurer, December 31, 1917 | | $4,445 84 |

## *Chapter 181, Laws of 1917, Part 2*

DEBIT

| | |
|---|---|
| Appropriation | $700 00 |

No disbursements up to December 31, 1917.

## *Chapter 181, Laws of 1917, Part 3*

DEBIT

| | |
|---|---|
| Appropriation | $950 00 |

CREDIT

| | | | |
|---|---|---|---|
| 1. | Webster-Case Hardware Co., furnace repair | $51 82 | |
| 2. | Green Hardware Co., galvanized pipe | 252 34 | |
| | | | 304 16 |
| | Balance with State Treasurer, December 31, 1917 | | $645 84 |

## *Chapter 181, Laws of 1917, Part 5*

DEBIT

| | |
|---|---|
| Appropriation | $4,352 22 |

CREDIT

| | | |
|---|---|---|
| 1. | Green Hardware Co., hardware | $52 62 |
| 2. | Green Hardware Co., plumbing | 29 35 |
| 3. | William Mearns, painting, etc | 160 00 |
| 4. | H. A. Beardsley, china and bedclothes | 34 35 |
| 5. | John R. Lingenfelter, laborers | 220 00 |
| 6. | L. Sonneborn & Sons, lapidolith | 78 75 |

| | | | |
|---|---|---|---|
| 7. | Green Hardware Co., repairs | $53 25 | |
| 8. | Green Hardware Co., hardware, etc | 108 41 | |
| 9. | John R. Lingenfelter, laborers | 272 50 | |
| 10. | L. S. Coleman, drain tile | 52 50 | |
| 11. | S. L. Strivings, wire fence | 11 40 | |
| 12. | Bert Jones, teams and labor | 127 50 | |
| | | | $1,200 63 |
| | Balance with State Treasurer, December 31, 1917 | | $3,151 59 |

## PHILIPSE MANOR HALL

### Description and Location

Philipse Manor Hall is the ancient stone and brick building in Yonkers, N. Y., which was the residence of the Lords of the Manor of Philipsborough up to the time of the Revolutionary War. There is an extended historical sketch of this property in our Thirteenth Annual Report (1908) and a fuller history of the Manor, the building and its occupants in a cloth bound book of 255 pages and illustrations entitled "Philipse Manor Hall," by Edward Hagaman Hall, L. H. D., published by this Society and sold at 50 cents a copy plus cost of carriage.

The Manor Hall stands in the midst of an acre of ground fronting on Warburton Avenue, Dock Street and Woodworth Place, about five minutes' walk from the New York Central & Hudson River railroad station. Its age is uncertain, but it dates back at least to 1725 or 1730 and part of it possibly to 1682. As the social and administrative center of one of the great Colonial Manors of the Hudson Valley, and the representative of the ancient system of land tenure and government, it recalls an institution which is outgrown but which had an important influence on the early history of the State. At the time of the War of Independence, Frederick Philipse, the last Lord of the Manor, sympathized with the Crown and his estate was forfeited to the then young state of New York. The Commissioners of Forfeiture sold it to private parties, and in the course of time the Manor Hall and a small piece of land were acquired by the village of Yonkers. The building was used for years as a village hall, and when the village became a city, the building became the City Hall. While in possession of the municipality it was threatened with many changes and mutilations, which led to a movement extending over

many years for its preservation as a public monument. This movement culminated in the gift of $50,000 by the late Mrs. William F. Cochran of Yonkers for its purchase, on condition that it should be maintained as a public monument for historical and patriotic purposes and should be in the custody of this Society. It was accepted by the State by chapter 168 of the laws of 1908. As the land and buildings are valued at $100,000, the City of Yonkers, in consenting to sell the property for $50,000, may be said to have contributed $50,000 also toward the consummation of this patriotic object.

In addition to the $50,000 purchase money which was paid directly to the City of Yonkers, Mrs. Cochran and her son, Mr. Alexander Smith Cochran, have given to this Society $17,264.75 for the renovation of the Manor Hall and $865.04 for the publication of the Manor Hall book.

In addition to the historical and architectural interest of the building, it contains a collection of colonial furniture and of oil paintings by Benjamin West, Gilbert Stuart, Copley, Peale and other distinguished artists, loaned by Mr. Cochran. A complete list of the paintings, which are valued at $100,000, is given in our Annual Report for 1917. This collection is of more than pecuniary value, as it is probably unique of its kind, containing one or more portraits of every President of the United States. Artists from all over the country go to the Manor Hall to see the building and its interesting contents.

Upon the northwestern corner of the surrounding grounds we have erected a building of brick for janitor's quarters and the heating apparatus, the steam from which is conducted to the Manor Hall through underground pipes. Both buildings are lighted with electricity and every reasonable precaution for safety against burglars and fire has been taken.

On the east side of the Manor Hall stands the Soldier's Monument.

Under ordinary conditions,— to which an exception is noted hereafter,— the Manor Hall is open on weekdays from 9 a. m. to 12 m. and from 2 to 5 p. m., and on Sundays from 2 to 6 p. m. Admission is free.

### Manor Hall Committee

Our local committee in charge of the Manor Hall is composed of Hon. Stephen H. Thayer, Chairman; Miss Mary Marshall Butler, Mr. Alexander Smith Cochran, Mr. Hampton D. Ewing, Miss Elizabeth P. Hale, Mrs. Alexander Henderson, Mr. William L. Kingman, Mrs. Florence S. Rogers and Nathan A. Warren, M. D.

### Maintenance

During the year ended December 31, 1917, we expended in the administration of this Manor Hall property $3,702.56, which is over a thousand dollars less than the preceding year. Most of this expense was for the services of the superintendent, who is in attendance during the day time of weed-days and part of the time on Sundays; the janitor, who lives in the little brick cottage in the northwest corner of the grounds and who, in addition to his usual duties as janitor, has charge of the steam heating apparatus in that building which heats the Manor Hall, and takes care of the grounds; and the watchman who guards the Manor Hall at night. The other principal expenses have been due to repairs to buildings, lighting and heating, and planting and care of the grounds.

The flower beds were planted and cared for as usual, thus maintaining the park-like aspect of the grounds the same as before the property came into the possession of the State. As the Manor Hall lies in the heart of the business part of the city, the neat and tidy appearance of the grounds serves as a good civic example.

### An Historical and Patriotic Center

The Manor Hall is the historical and patriotic center of the town. Here meetings and celebrations are held on the principal public holidays and patriotic activities are carried on in the Manor Hall itself. The Keskeskick chapter of the Daughters of the American Revolution have been allowed to use the large room on the first floor of the north wing, in which they have an interesting collection of old furniture, for the Red Cross and other war work, and the Daughters of the British Empire have also been doing army work here during the past year. It is an interesting and

striking commentary on the changes which Time works and on the closeness of the American and British entente at the present time that the daughters of the two nations of the present generation are here working side by side in a common cause, where, in the days of Mary Philipse, there were scenes of such a different character. On the Fourth of July, there was the usual celebration by the Grand Army of this Republic, the National Guard, the school children, and others around the Soldiers' Monument.

### Application for Use Denied

During the past year the Society has received various requests for the use of the Manor Hall, and has felt not a little embarrassed in determining between its inclination to accede to requests sometimes worthy in themselves and its sense of duty as trustees of a rare public property.

About a year ago we received an application for permission to install in the Manor Hall a Dutch museum under outside auspices. The history, purposes and present uses of the Manor Hall did not seem to concur in making it desirable to convert it into a distinctively Dutch museum, and the application was denied.

In March, 1917, application was made for permission to conduct in the Manor Hall a night school for aliens. The object appeared to be eminently worthy, but the application was denied on the ground that such accommodations should be found in the public schools, and for other reasons.

In November, 1917, the Society received an application from the Daughters of the American Revolution for more extensive accommodations in the Manor Hall for war relief work, for permission to hold therein entertainments to which an admission fee should be charged, and for permission to install an electric heater for making tea. The Trustees were obliged to deny the application, much to their regret, for they have a very high valuation of the patriotic work of the D. A. R. What that society is now doing for the country is thoroughly expressive of the spirit which has animated it since its organization. It was therefore not because of any lack of appreciation of their public spirit and unselfish motives that the Trustees hesitated to accede to their request. The reasons for the Trustees' action were as follows:

With respect to the request for more room space, the D. A. R. now have the use of a room about 23 by 35 feet in size on the first floor of the north wing. It is the largest room in the house except the auditorium or assembly hall on the floor above. The room next adjoining is used as the Superintendent's office and for the library of the Yonkers Historical Society. The four rooms in the south wing, two on the first floor and two on the second, are devoted to the very valuable Cochran Art Collection. For artistic and other considerations these four rooms must be reserved for the purposes for which they are now used. This art collection is unique and costly, and is guarded against injury and loss by a careful and expensive electric protective system. We should consider it as inappropriate to surrender these rooms for other purposes as for the Metropolitan Museum of Art or the New York Public Library to surrender similar art-gallery space for other purposes. The only unoccupied room on the first two floors is the assembly hall on the second floor which we have tried to keep free for public occasions. The only other rooms are three little enclosures in the attic which are inappropriate, inconvenient, ill-lighted, and unsuitable for the desired use.

As to the charging of admission fees, the Charter of this Society empowers it to hold property in fee or trust " admission to which shall be free to the public under such rules for the protection thereof " as the Society may prescribe. We have taken this to be the spirit of the public trusts committed to our hands, and no admission fee is charged in connection with any of the several State properties in our custody. Our Trustees deem it in the public interest highly inadvisable to depart from this policy.

Concerning the use of an electric heater for making tea, we have felt that the end desired was not sufficiently important to warrant running even the slight risk of fire which the use of movable electric wires and fixtures might involve. When we first took charge of the Manor Hall, our first care was to remove all heating apparatus from the building and to erect a special detached building for that purpose, from which heat is transmitted underground to the Manor Hall. This was done to eliminate danger from fire. The Trustees feel that the Manor Hall is such a precious relic of the history of Yonkers as well as of the State of

New York, that it ought not to be exposed to any risk. The loss of or injury to this historic monument would be as great a calamity to the D. A. R. as to the people of the State at large. A modern building might be replaced with only pecuniary loss, but the Manor Hall, with its ancient traditions, and its rare art collection, if destroyed by accident, could not be replaced any more than the landmarks and art treasures which are now being destroyed intentionally abroad. Therefore as conservators of public property, the Trustees felt constrained to deny the request.

### Red Cross Work in Manor Hall

On January 30, 1918, we received an application from the Yonkers Branch of the Westchester County Chapter of the American Red Cross for use of the Manor Hall for Red Cross work. The officers of the Yonkers Branch are Mrs. Walter M. Taussig, Chairman; Mrs. A. W. Elliman, Treasurer; and Mrs. W. R. Reeves, Secretary. Mr. Alexander B. Halliday of No. 44 Pine Street, New York City, was the member of their committee having the matter of the application in charge. A letter from Mr. Halliday dated February 13, 1918, explained that the Red Cross would like to have the use of the large assembly room on the second floor, the small room on the first floor now used for the Superintendent's office and Yonkers Historical Society's Library; a share of the large room on the first floor used by the D. A. R.; and one or two rooms now used by the Cochran Art Collection.

It is needless to say that the Trustees of the Society and our local Manor Hall Committee have the greatest interest in and admiration for the American Red Cross, most of them being members of the Red Cross themselves and contributing in various ways to its support; but the request of the Red Cross for the use of practically three-quarters of the building, already devoted to other uses, appeared to be open to the objection mentioned in connection with the earlier application of the D. A. R.

The Trustees and our local committee, however, made careful inquiry into the matter, and in the light of what they learned and of supplementary information supplied by the Red Cross, decided on February 25, 1918, to grant restricted permission to use the rooms on the first and second floors of the north wing for

office headquarters, the issuing of knitting wool and the return of knitted articles; and for the preparation of surgical dressings. The permission was granted on condition that no cutting or other machines requiring heat or electricity, or light other than that now supplied, should be used, that suitable fire-extinguishing appliances should be provided, that strict oversight should be maintained to avoid the accumulation of rubbish and prevent fire, and that every other suitable precaution should be exercised for the safety of the building and its contents. The Daughters of the American Revolution and the Yonkers Historical Society, who have been accorded the use of two rooms under revocable permission, expressed their readiness to share those rooms with the Red Cross, and Mr. Cochran interposed no objection to such use of the north wing because of his valuable art collection in the south wing.

Miss Jean A. Reid, Directress of the Red Cross Work, personally appeared at the meeting of the Trustees in New York on the evening of February 25, 1918, and explained the methods and kinds of work to be done in the Manor Hall, and it was largely due to her statements and assurances that the Trustees adopted the following resolution:

"Resolved: That the Manor Hall Committee be authorized to grant permission to the Yonkers Branch of the Westchester County Chapter of the American Red Cross to use, during the pleasure of the Board, the part of the north wing of the Manor Hall asked for by the Red Cross, it being understood that the Manor Hall Committee will impose as a condition of the occupancy of the building every reasonable precaution against fire or other injury to the building or its contents."

In adopting this resolution, the Trustees did it with the tacit understanding that it was not to constitute a precedent. The Red Cross work is unique. It directly affects the lives and well-being of the American soldiers who are fighting for the maintenance of the liberty and very civilization of our nation as well as those of our allies. Another such emergency will not arise, probably, during the present generation — and, it is to be hoped, never,— and therefore the permission to the Red Cross must remain unique and is not to be a precedent for other and unlike applications.

### Closed for Lack of Coal

Owing to the coal famine in the opening weeks of 1918, we were obliged to close the Manor Hall from January 1 to February 21.

### Visitors

The number of visitors to the Manor Hall during the year ended December 31, 1917, as nearly as we can estimate without the aid of turn-stiles, was 10,309. This estimate is based on the number actually counted by the Superintendent, with an addition of 25 per cent to cover persons not so counted. The register of guests shows that visitors have come from Arizona, California, Colorado, Delaware, District of Columbia, Florida, Georgia, Illinois, Indiana, Kansas, Louisiana, Massachusetts, Michigan, Missouri, Montana, Nebraska, New Mexico, New York, New Jersey, Ohio, Pennsylvania, Rhode Island, Tennessee, Texas, Utah, Vermont, Virginia, Washington and Wisconsin; also from Vancouver, B. C., and other parts of the Dominion of Canada, Cuba, San Domingo, Columbia, several from London, Eng., Carlisle, Eng., Oldham Lane, Eng., Glasgow, Scotland, Dublin, Ireland, Johannesburg, South Africa, and China. The names of many well known artists, sculptors, architects, literatteurs, statesmen, and soldiers are autographed in the visitors' book. The Manor Hall, with its historical associations with the War for American Independence, has a splendid attraction for the soldiers encamped in Van Cortlandt Park and neighborhood, and many of them visit the building almost every day. The Superintendent, Mr. George W. Chamberlain, being a Civil War veteran, gives them a " soldier's welcome " as well as a state welcome.

### Financial Statement of Cochran Gift

The financial statement of the Manor Hall Fund, Cochran Gift, belonging to the Society is given with the accounts of the other Society funds on page 51 preceding.

### Financial Statement of State Funds

Following is a statement of state funds received and disbursed on account of Philipse Manor Hall during the year ended December 31, 1917:

*Chapter 646, Laws of 1916, Part 1*

DEBIT

| | | |
|---|---|---|
| Appropriation | | $3,450 00 |

CREDIT

| | | |
|---|---|---|
| Disbursements before reported | $1,284 86 | |
| 33. G. W. Chamberlain, superintendent, December | 100 00 | |
| 34. Ernest Schadtle, janitor | 50 00 | |
| 35. John Maloney, watchman | 62 50 | |
| 36–41. Yonkers El. Lt. & P. Co., October, November, December | 18 26 | |
| 42. N. Y. Telephone Co., December | 4 05 | |
| 43. G. W. Chamberlain, superintendent, January | 100 00 | |
| 44. Ernest Schadtle, janitor | 50 00 | |
| 45. John Maloney, watchman | 62 50 | |
| 46. S. H. Thayer, paid water rent | 6 36 | |
| 47. N. Y. Telephone Co., January service | 4 00 | |
| 48. S. H. Thayer, disbursements | 4 20 | |
| 49–50. Yonkers El. Lt. & P. Co., January service | 7 26 | |
| 51. S. H. Thayer, paid for repairs | 6 65 | |
| 52. N. Y. Telephone Co., February service | 4 00 | |
| 53. G. W. Chamberlain, superintendent, February | 100 00 | |
| 54. Ernest Schadtle, janitor | 50 00 | |
| 55. John Maloney, watchman | 62 50 | |
| 56. S. H. Thayer, paid for labor, etc | 5 05 | |
| 57–58. Yonkers El. Lt. & P. Co., February service | 5 64 | |
| 59. N. Y. Telephone Co., March service and tolls | 4 35 | |
| 60. G. W. Chamberlain, superintendent, March | 100 00 | |
| 61. Ernest Schadtle, janitor | 50 00 | |
| 62. John Maloney, watchman | 62 50 | |
| 63. N. Y. Telephone Co., April service | 4 00 | |
| 64. W. H. Sweeney, fertilizer and labor | 65 00 | |
| 65–66. Yonkers El. Lt. & P. Co., March service | 4 80 | |
| 67–68. Chadburn & Edwards, carpenter work, etc | 214 10 | |
| 69. G. W. Chamberlain, superintendent, April | 100 00 | |
| 70. Ernest Schadtle, janitor | 50 00 | |
| 71. John Maloney, watchman | 62 50 | |
| 72. S. H. Thayer, paid water rent to April 1, 1917 | 2 00 | |
| 73. Hays & Randolph Co., fuel | 199 25 | |
| 74. Macdonald Floral Co., plants and labor | 22 95 | |
| 75. S. H. Thayer, paid for labor | 25 35 | |
| 76. G. W. Chamberlain, superintendent, May | 100 00 | |
| 77. Ernest Schadtle, janitor | 50 00 | |
| 78. John Maloney, watchman | 62 50 | |
| 79–80. Yonkers El. Lt. & P. Co | 5 40 | |
| 81. N. Y. Telephone Co., May service, etc | 4 20 | |
| 82. G. W. Chamberlain, superintendent, June | 100 00 | |
| 83. Ernest Schadtle, janitor | 50 00 | |
| 84. John Maloney, watchman | 62 50 | |

| | | | |
|---|---|---|---|
| 85–86. | Yonkers El. Lt. & P. Co | $4 44 | |
| 87. | N. Y. Telephone Co., June service | 4 00 | |
| 88. | Hays & Randolph Co., fuel | 31 46 | |
| 89. | S. H. Thayer, paid water rent | 2 30 | |
| 90–91. | Yonkers El. Lt. & P. Co | 3 36 | |
| 92. | Thomas McVicar, repairs | 6 49 | |
| 93. | S. H. Thayer, paid for sundries | 3 85 | |
| | Lapsed | 4 87 | |
| | | | $3,450 00 |

## *Chapter 181, Laws of 1917, Part 1*

DEBIT

Appropriation ..... $3,275 00

CREDIT

| | | | |
|---|---|---|---|
| 1. | G. W. Chamberlain, superintendent, July | $100 00 | |
| 2. | Ernest Schadtle, janitor | 50 00 | |
| 3. | John Maloney, watchman | 62 50 | |
| 4. | Hays & Randolph Co., fuel | 20 00 | |
| 5. | R. T. Broderick, plants and planting | 63 08 | |
| 6. | S. H. Thayer, paid for labor | 6 00 | |
| 7. | G. W. Chamberlain, superintendent, August | 100 00 | |
| 8. | Ernest Schadtle, janitor | 50 00 | |
| 9. | John Maloney, watchman | 62 50 | |
| 10–11. | Yonkers El. Lt. & P. Co | 3 72 | |
| 12. | Yonkers Painting & Decorating Co., sign | 12 50 | |
| 13. | Bennetts & Son, painting and papering | 104 00 | |
| 14. | James D. Cochran, iron gates | 30 00 | |
| 15. | G. W. Chamberlain, superintendent, September | 100 00 | |
| 16. | Ernest Schadtle, janitor | 50 00 | |
| 17. | John Maloney, watchman | 62 50 | |
| 18. | S. H. Thayer, paid for labor, etc | 3 75 | |
| 19. | Yonkers El. Lt. & P. Co | 1 92 | |
| 20. | F. B. Mee, sign-board | 8 46 | |
| 21. | H. L. Twine, tools, etc | 5 83 | |
| 22. | Yonkers El. Lt. & P. Co | 1 02 | |
| 23. | G. W. Chamberlain, superintendent, October | 100 00 | |
| 24. | Ernest Schadtle, janitor | 50 00 | |
| 25. | John Maloney, watchman | 62 50 | |
| 26. | N. Y. Telephone Co., July, August, September | 2 63 | |
| 27. | N. Y. Telephone Co., October | 4 00 | |
| 28. | Oliver A. Quayle, printing | 8 56 | |
| 29–30. | Yonkers El. Lt. & P. Co., September | 4 32 | |
| 31. | G. W. Chamberlain, superintendent, November | 100 00 | |
| 32. | Ernest Schadtle, janitor | 50 00 | |
| 33. | John Maloney, watchman | 62 50 | |
| | | | $1,342 29 |

Balance with State Treasurer December 31, 1917..... $1,922 71

*Chapter 181, Laws of 1917, Part 3*

DEBIT

| | |
|---|---|
| Appropriation | $200 00 |

CREDIT

| | |
|---|---|
| 1. Bennetts & Son, papering, painting, etc | 200 00 |

## JOHN BOYD THACHER PARK

### Location and Description

No two of the State properties in the custody of this Society resemble each other, and John Boyd Thacher Park has its distinct individuality. It is a striking illustration of the wide diversity of geologic structure, physiographic form and scenic beauty which characterize different parts of the State of New York.

John Boyd Thacher Park is a tract of about 350 acres of land on the crest of the Helderberg escarpment about fifteen miles due west of Albany. It is situated in the towns of New Scotland and Guilderland, Albany county. It is about two and a half miles from Meadowdale station on the Delaware and Hudson railroad and about 5¾ miles from Altamont on the same road. The post-office address of the superintendent, however, is East Berne, Albany county.

The park was given to the State by Mrs. John Boyd Thacher of Albany in memory of her late husband. Mr. Thacher was a distinguished citizen of Albany. He was State Senator, served two terms as Mayor and had an international reputation as an author. The gift was accepted by the State of New York and committed to the custody of this Society by chapter 117 of the laws of 1914. An extended description of this beautiful property is given at pages 341–377 of our Nineteenth Annual Report for 1914.

The park extends about three miles along the Helderberg escarpment. This interesting geological formation has an altitude of from 1100 to 1800 feet above sea-level, and here faces eastward and northeastward. The immediate foreground for many miles beyond the foot of the cliffs lies below the 400 foot contour. Beyond this and the middle distance can be seen Mount Mac-

Gregor in one direction and in another the northern extremity of the Berkshires in Vermont. The park is diversified by hills, meadows, precipitous cliffs, brooks, cascades and waterfalls, caves and subterranean streams, forests and orchards. Fossils are so abundant in the limestones frequently called the "Helderberg geological series" that they can be picked out of the exposed strata, from stone fences or from plowed fields. It is a geologists' paradise, and has been visited by some fifty of the leading geologists, paleontologists, and men eminent in related branches of science, including Agassiz, Dana and Lyell. The park also has historical associations reaching back to Indian days, so that it possesses three-fold value on account of its natural beauty, its scientific interest and its historical associations.

### John Boyd Thacher Park Committee

Our standing committee in immediate charge of the administration of the park consists of Mr. Francis Whiting Halsey of New York, Chairman, Hon. Benjamin W. Arnold of Albany, Mrs. Daniel Manning of Albany, Prof. John C. Smock of Hudson, N. Y., Mrs. John Boyd Thacher of Albany, and Hon. James F. Tracey of Albany.

The Superintendent is Mr. John H. Cook, and we take this occasion to express our sense of the good fortune of the State to have the services of a man of so many talents in this position, which, in the circumstances mentioned hereafter, involves so many hardships. We feel that his salary is an inadequate return for his faithful service, and that he merits this special word of commendation.

### General Maintenance and Repairs

A great deal of work, of little public interest but requiring time, labor and attention and necessary to the upkeep of this park, was done in 1917. Grass, weeds and underbrush were cut and burned; pump installed in the well; small building to house explosives built; dying trees removed; stumps blasted out; wire fencing erected; road drains built; stone fences removed in some places and repaired or built in others, etc.

Comparatively little road work was done in 1917, owing to lack of a sufficient appropriation. The Saw Mill and Cliff road were put in condition to permit the drawing of sub-soil for grading, and the permanent roadway to the Bungalow and parking place for motor cars was surveyed and graded and the sub-base laid. The parking space was surfaced with crushed stone and the whole environment of the Bungalow greatly improved. The value of this improvement has already been demonstrated in the increased use of the park. It is apparent already that the accommodation for automobiles at this point is inadequate. The capacity of the parking space is sixty cars, and several times during the summer of 1917 there were more than that number of cars on the grounds.

In May, all of the red and white oaks which were ready to be removed from the nursery were set out and a plantation of 42 white pines from 6 to 15 years old was made along the Rock road at the entrance to the park.

On Saturday, May 19, 1917, fire was discovered in La Grange woods. A force of fire-fighters was assembled and the fire brought under control by midnight, but continued to smoulder until extinguished by the heavy rain on Tuesday. The damage was slight.

### Discontinuance of Section of Rock Road

Application to the Town Board and Town Superintendent of Roads of New Scotland was made for the discontinuance of that "part of the highway in the town of New Scotland, Albany county, N. Y., known as the Rock road; said part beginning at the head of the Indian Ladder road and extending westerly for a distance of approximately 440 feet." There are no houses along the section of the road to be discontinued, and it lies entirely within the State lands of John Boyd Thacher Park. The application was made on account of the dangerous character of the road at that point, which runs over bare rock at a sharp grade, and because the new road around the Bungalow on which is the parking-place for automobiles and which joins both ends of the discontinued section, is safer and better.

### The Bungalow

The Bungalow, which we moved and remodeled in 1916, was rented to William J. Smith of Altamont for the season of 1917 for the purpose of selling refreshments.

### Flag-pole Erected

In July, 1917, a flag-pole 40 feet high was erected in front of the Bungalow, and on July 14, a new United States flag was hoisted on it. The location is well chosen and the flag can be seen from a great distance.

### Disputed Boundary Line

During the spring and summer of 1917, the Superintendent surveyed certain lines of the park, discovering a conflicting claim involving a gore of land comprising about three acres. Under date of August 14, 1917, we wrote to the Attorney General on this subject as follows:

August 14, 1917.

The Attorney General of the State of New York,
Hon. Merton E. Lewis,
Albany, N. Y.

Dear Sir:

The American Scenic and Historic Preservation Society (incorporated by chapter 166 of the laws of 1895 as amended by chapter 302 of the laws of 1898 and chapter 385 of the laws of 1901) is by chapter 117 of the laws of 1914 custodian of the State property known as John Boyd Thacher Park in the towns of New Scotland and Guilderland, Albany county.

A question has arisen in regard to one of the boundary lines of this park affecting a little more than three acres of land, and we respectfully call it to your attention for such action as your Department may deem necessary or for your advice as to any action which this Society should take properly to protect the interests of the State.

By an indenture dated February 9, 1914, Emma Treadwell Thacher (widow of John Boyd Thacher) conveyed to the State of New York several parcels of land, including "All that certain tract, piece or parcel of land situate, lying and being in the Town of Guilderland in the County of Albany and State of New York (it being the east part of the farm formerly owned by Nicholas J. Winne) bounded and described as follows, viz: Beginning at a

stake 754 feet in course north 85 degrees east from the north-east corner of lot No. 657 and runs from thence, as the Magnetic Needle originally pointed, north 85 degrees east five hundred feet to a stake; thence due south seven hundred and ninety-two feet; thence south 16 degrees thirty (30) minutes west two thousand six and four-tenths feet to a point on the top of a precipice; thence south 85 degrees west five hundred feet to a stake in the south line of lot No. 657; thence north 16 degrees 30 minutes east two thousand six and four-tenths feet to a stake; thence due north seven hundred ninety-two feet, to the place of beginning, containing thirty and twenty-eight one hundredths (30 28/100) acres of land, more or less; . . .

"Being the same premises conveyed and described in a deed of conveyance made, executed and delivered by Simon P. Winne and Margaret A. Winne, his wife, to John Boyd Thacher, bearing date January 6, 1908, and recorded in Albany County Clerk's office January 8, 1906, in Book No. 545 of Deeds, page 319."

(See bottom of page 371 and page 372, Nineteenth Annual Report of this Society, 1915.)

The line whose location is in dispute is the fifth course above quoted, namely, "north 16 degrees 30 minutes east 2006.4 feet to a stake," being the line A–B on the accompanying diagram which we claim to be the true line. Alma Hurst, the owner of the adjacent property on the west, claims that the line D–B is the correct line. (See plate 39.)

In order to a general understanding of the matter in question, it may be stated that in the first surveys made for the Patroon Van Rensselaer (for the towns of Knox and Berne, 1789) a large tract was divided into great lots each of which was designated by a number. The boundaries of these lots ran north 85 degrees east and south 85 degrees west, and north 5 degrees west and south 5 degrees east. The east line of lot No. 657 referred to in the conveyance by Mrs. Thacher to the State lies in the "Ten Mile Line" (now the boundary between the towns of Berne and Knox on the west and New Scotland and Guilderland on the east). The land was not laid out in great lots east of the Ten Mile Line. The expression "as the magnetic needle originally pointed" is evidently intended to refer to the original survey in 1789, since which time the needle has altered 6° 55′ 42″.

The boundaries of the piece of land lying between the eastern boundary of lot No. 657 and the cliff are given in all deeds recorded in the Office of the Clerk of Albany County (as though quoted from the original lease to Wilhelmus Pitcher) as "beginning at said northeast corner of lot No. 657, heretofore conveyed to Alexander Cornell, runs thence north 85 degrees east 19 chains;

thence due south 12 chains; thence south 16° 30′ west 30 chains and 40 links to an iron-wood on the edge of the precipice; thence south 85 degrees west 7 chains and 64 links to a cornered beech at the southeast corner of lot No. 657; thence along the east bounds of lot No. 657 north 5 degrees west 40 chains to the place of beginning." (Liber 340 of deeds, page 397.)

The deed from Mrs. Thacher to the State conveys (in foot-measurements harmonious with the earlier chain measurements) a portion of the area lying east of lot 657 bounded by parallel lines, and 500 feet broad when measured parallel with the north and south boundaries. This brings the southwest corner of the parcel conveyed to the State a few feet west of the southeast corner of lot 657, and locates it *in* the south line of lot 657 as described in the deed.

Subsequent to the conveyance by Simon P. Winne to John Boyd Thacher of the above described parcel which Mrs. Thacher later conveyed to the State, Winne conveyed to Alma Hurst the remainder of his farm comprising lot 657 and the land immediately east thereof up to the line of the land conveyed to Thacher. Mrs. Hurst is therefore the present owner of said land adjacent to the State land and is the disputant of the line in question.

When the State came into possession and this Society into the custody of John Boyd Thacher Park, we found three monuments at the points indicated by the letters D, E and C on the accompanying diagram which Mrs. Hurst claims indicate the proper dividing line. Concerning that portion of the boundary from B to C there is no dispute; but we claim that the line from D to B is not the true boundary. The gore of land between the lines claimed by us in behalf of the State and the line claimed by Mrs. Hurst contains about 3.185 acres.

Concerning the monuments C, D and E above referred to, we learn that they were set by Albertus Hallenbeck subsequent to the conveyance of the property by Winne to John Boyd Thacher; that Hallenbeck set them where he claimed to have seen Leslie Allen, a surveyor, set stakes; that Hallenbeck believed he knew where these stakes had been set because he accompanied Allen in what Hallenbeck assumed to be a survey of the ground at the time of the conveyance from Winne to Thacher.

In 1915, the Superintendent of the Park having obtained surveying instruments, attempted to follow the courses mentioned in the deed from Mrs. Thacher to the State. The result showed that the monument D is not "*in* the south line of lot No. 657" as called for in the deed but 105 feet east of the southeast corner of lot No. 657, and therefore does not mark a point of division between the property of the State and Mrs. Hurst. In like man-

ner the monument E was found to be not in the division line but on the property of the State. The course indicated by the monuments D and E is north 18° 30′ east in 1916, which is the equivalent of north 11° 30′ east in 1789; whereas the course of the proper boundary as stated in the deed to the State is north 16° 30′ east as of 1789. It may be stated in passing, that these monuments are not mentioned in the deed from Winne to Thacher or in the deed from Thacher to the State.

We believe that we can prove that Leslie Allen never made any complete survey of the ground conveyed to the State; that the courses furnished by him from which the description in the deed was drawn were made by him from his knowledge of the older deeds and the original lease from the patroon Stephen Van Rensselaer to Wilhelmus Pitcher, in which the lot (a part of which is now the property of the State,) is bounded on the east by courses 2 and 3 of the description first quoted except that the distances are given in chains and links instead of feet; and that the stakes set where the monuments now are, if intended by Allen to mark the boundary (which may not be the case) were erroneously located by reason of his not making a complete survey and location of the original lines.

Allen is dead. So is Simon P. Winne who conveyed the contiguous properties to John Boyd Thacher and Alma Hurst respectively. Any adjustment of claims between Mrs. Hurst and her grantor which may grow out of a decision in favor of the State in this matter will fall back on the estate of Winne.

As custodian of the State's property, we should like to have the location of the line in question determined judicially; and would thank you for your advice as to our duty in the matter.

Yours truly,

E. H. Hall,
Secretary.

The Attorney General now has the matter under advisement.

### Need for an Administration Building

Nominally, the administrative center of the park is a group of old buildings, consisting of an ancient wooden dwelling, a barn and some out-buildings, standing on the north side of the main road leading to the Indian Ladder just within the western entrance to the park. As a matter of fact, there is no Administrative Center within the park boundaries because there is no habitable building in which the Superintendent can live. In

1916 we took some steps with a view to remedying this anomalous situation, when we moved the old residence northwestward a few hundred feet to higher ground and placed it on a new foundation in October. Previous to removing the main part from the old foundation the addition in the rear was demolished, it not being worth the expense of trying to move it intact. After removal to its new site, the administration building was boarded up to protect it from the elements. We have asked the Legislature for the necessary funds with which to put this building in habitable condition, but have not yet received them. At present, the Superintendent is obliged to rent, at his own expense, a cottage half a mile from the park. This is both unjust to the Superintendent and highly inadvisable from the administrative standpoint. As we said last year, we believe that the Superintendent of a park of 350 acres should live within the bounds of the territory for which he is accountable, not only that he may properly perform his duties, but also in order that the public may have ready access to the executive office for information, permits, etc. We urgently press this need upon the consideration of the Legislature. John Boyd Thacher Park is the nearest State park to the State Capital. It is wonderfully situated from the scenic standpoint; it offers splendid facilities for camping and healthy out-door life in summer; and it is one of the richest places of scientific interest in the State, as is evidenced by the constant visits of the leading geologists of the country. The opportunities here presented for education, recreation, and health recuperation are so great that any money expended by the State in this direction is one of its best investments.

### Need of Buildings for a Labor Center

We have also asked the Legislature for funds with which to repair the old cottage at the so-called Labor Center or to build a new one suitable for housing the employees of the park. It is always difficult to get laborers for the park because there is no place in or near the park where workmen can be boarded conveniently and economically.

## Financial Statement of State Funds

Following is a statement of moneys received and disbursed on account of John Boyd Thacher Park during the year ended December 31, 1917:

### *General Account*

| 1917 | | DEBIT | |
|---|---|---|---|
| June 22. | | Albertus Hallenbeck, second-hand roofing | $5 00 |
| July 5. | | Wm. J. Smith, refreshment privilege | 25 00 |
| Aug. 6. | | Wm. J. Smith, refreshment privilege | 20 00 |
| Aug. 6. | | Wm. J. Smith, ice | 1 40 |
| Oct. 18. | | Wm. J. Smith, ice | 2 90 |
| | | P. C. See, second-hand stanchions | 2 10 |
| | | | $56 40 |

| | | CREDIT | | |
|---|---|---|---|---|
| June 11. | | Remitted to State Treasurer | $5 00 | |
| July 20. | | Remitted to State Treasurer | 25 00 | |
| Aug. 15. | | Remitted to State Treasurer | 21 40 | |
| Oct. 24. | | Remitted to State Treasurer | 5 00 | |
| | | | | 56 40 |

### *Chapter 725, Laws of 1915*

| DEBIT | |
|---|---|
| Appropriation | $4,800 00 |

| CREDIT | | |
|---|---|---|
| Disbursements before reported | $4,460 75 | |
| 64. E. G. Crannell, lumber | 80 47 | |
| 65. John H. Cook, paid for nails | 7 75 | |
| Lapsed | 251 03 | |
| | | 4,800 00 |

### *Chapter 726, Laws of 1915*

| DEBIT | |
|---|---|
| Appropriation | $2,700 00 |

| CREDIT | | |
|---|---|---|
| Disbursements before reported | $2,642 45 | |
| 43. Joseph Green, signs | 56 00 | |
| Lapsed | 1 55 | |
| | | 2,700 00 |

## *Chapter 646, Laws of 1916, Part 1*

DEBIT

| | | |
|---|---|---|
| Appropriation | | $2,350 00 |

CREDIT

| | | | |
|---|---|---|---|
| Disbursements before reported | $1,014 44 | | |
| 12. John H. Cook, superintendent, December | 83 34 | | |
| 13. John H. Cook, paid for labor, etc | 68 48 | | |
| 14. John H. Cook, superintendent, January | 83 33 | | |
| 15. Clarence C. De Lack, foreman | 50 00 | | |
| 16. John H. Cook, paid for labor, etc | 42 31 | | |
| 17. John H. Cook, superintendent, February | 83 33 | | |
| 18. Clarence C. De Lack, foreman | 50 00 | | |
| 19. John H. Cook, paid for labor, etc | 19 67 | | |
| 20. W. & L. E. Gurley, chain tape, etc | 9 48 | | |
| 21. John H. Cook, superintendent, March | 83 34 | | |
| 22. Clarence C. De Lack, foreman | 50 00 | | |
| 23. John H. Cook, superintendent, April | 83 33 | | |
| 24. Clarence C. De Lack, foreman | 50 00 | | |
| 25. John H. Cook, paid for hardware, etc | 174 50 | | |
| 26. John H. Cook, superintendent, May | 83 33 | | |
| 27. Clarence C. De Lack, foreman | 50 00 | | |
| 28. John H. Cook, paid for labor, etc | 70 30 | | |
| 29. E. H. Hall, traveling expenses | 29 19 | | |
| 30. John H. Cook, superintendent, June | 83 34 | | |
| 31. Clarence C. De Lack, foreman | 50 00 | | |
| 32. John H. Cook, paid for labor, etc | 37 84 | | |
| Lapsed | 45 | | |
| | | 2,350 00 | |

## *Chapter 181, Laws of 1917, Part 1*

DEBIT

| | | |
|---|---|---|
| Appropriation | | $2,150 00 |

CREDIT

| | | |
|---|---|---|
| 1. Annin & Co., flag | $14 00 | |
| 2. John H. Cook, superintendent, July | 83 33 | |
| 3. Clarence C. De Lack, ranger | 55 00 | |
| 4. John H. Cook, paid for labor, etc | 67 89 | |
| 5. Stoneman & Son, rope, etc | 7 14 | |
| 6. John H. Cook, superintendent, August | 83 33 | |
| 7. Clarence C. De Lack, ranger | 55 00 | |
| 8. John H. Cook, paid for labor, etc | 132 90 | |
| 9. John H. Cook, superintendent, September | 83 34 | |
| 10. Clarence C. De Lack, ranger | 55 00 | |
| 11. John H. Cook, paid for labor, etc | 206 62 | |
| 12. John H. Cook, superintendent, October | 83 33 | |

| | | | |
|---|---|---|---|
| 13. | Clarence C. De Lack, ranger | $55 00 | |
| 14. | John H. Cook, traveling expenses | 33 03 | |
| 15. | John H. Cook, paid for labor, etc | 57 63 | |
| 16. | John H. Cook, superintendent, November | 83 33 | |
| 17. | John H. Cook, paid for labor, etc | 54 41 | |
| 18. | Albany Hardware & Iron Co., hardware | 18 22 | |
| | | | $1,228 50 |
| | Balance with State Treasurer December 31, 1917 | | $921 50 |

*Chapter 181, Laws of 1917, Part 3*

DEBIT

| | |
|---|---|
| Appropriation | $1,000 00 |

CREDIT

| | | | |
|---|---|---|---|
| 1–3. | John H. Cook, paid for labor | $515 49 | |
| 4. | John H. Cook, paid for labor, etc | 110 93 | |
| 5. | John H. Cook, paid for labor, etc | 22 48 | |
| 6. | Greylock Construction Co., crushed stone | 42 12 | |
| 7. | Standard Oil Co., asphalt binder | 40 63 | |
| 8. | Greylock Construction Co., crushed stone | 153 45 | |
| 9. | John H. Cook, paid for hauling | 6 00 | |
| | | | 891 10 |
| | Balance with State Treasurer, December 31, 1917 | | $108 90 |

*Chapter 181, Laws of 1917, Part 5*

DEBIT

| | |
|---|---|
| Appropriation | $2 29 |

CREDIT

| | | |
|---|---|---|
| 1. | John H. Cook, paid for hardware | 2 29 |

## BATTLE ISLAND PARK

### Maintenance and Improvement

Battle Island Park is a tract of about 200 acres on the left bank of the Oswego River in the town of Granby, Oswego County, N. Y. It was given to the State in 1916 by Mr. Frederick A. Emerick of Oswego, and was accepted by chapter 308 of the laws of 1916.

At pages 705–723 of our Annual Report for 1916 we have given an account of the particular historical event because of which the park has been named. The property includes an island in the Oswego River upon which, as well as upon the adjacent mainland

of the park, a battle was fought on July 3, 1756, between colonial troops led by Capt. John Bradstreet and a party of 700 French and Indians, in which the colonials won the victory, after losing 20 men killed and 24 wounded. The enemy, who were in superior numbers, were reported to have lost above 100 killed.

In addition to this particular event, the property, situated on one of the principal water routes of the colonial period, and located at a point naturally eligible for camping, is attractive both on account of its associations with the past and its opportunities for present and future use. It has been frequented for many years by picnickers and campers from that vicinity, and it is the purpose of the gift that the park be made even more useful as a place of wholesome recreation and health-building.

The conveyance is dated April 8, 1916, and the act accepting it became a law by the Governor's signature on April 25, 1916. The law provides that the lands shall be forever dedicated to and used exclusively for the purpose of a public park and natural scenic reservation, and the American Scenic and Historic Preservation Society is given control and jurisdiction of the park for the purpose stated.

It is the donor's aim to preserve the property in its natural condition as nearly as possible, that is, as a piece of woodland lying on the river bank, surrounded by grass-land, and so arranged that vehicles leaving the State highway may pass through it. The property and improvements have cost the State nothing, and as the park increases in usefulness, the debt of the people to the donor, already large, will increase.

## TAPPAN MONUMENT PROPERTY

### Site of Andre's Execution

One cannot advert at this time to the history of the War for American Independence without calling up strangely contrasting ideas, and the landmarks of the struggle of American colonies with the Mother Country now take on, as never before, a peculiar interest. At this time, when the United States is the ally-in-arms of Great Britain, it is satisfactory to recall that the best American historians have long pointed out that the government of George III did not represent the true sentiment of the English people in the

policy which precipitated the American Revolution, and that fundamentally the struggle in America was for rights and liberties as essentially English as American.

For this reason it is easier to respect the memory of a brave and adventurous enemy like Major John Andre than that of a perfidious friend like Benedict Arnold, and for this reason also, the little circular plot of land, fifty-one feet in diameter in Tappan, N. Y., where Andre was executed, possesses increased interest at the present time. The Society purchased the place November 13, 1905, in response to public sentiment for its preservation expressed in a New York newspaper just prior to that time. Upon it stands the monument erected by Cyrus W. Field and dedicated October 2, 1879, to mark the place where Major Andre was executed. The monument cost about $1,500 to which we have added, at a cost of about $100, a tablet commemorating Washington's fortitude at one of the most critical periods of the War of Independence.

The circumstances of the erection of the monument are briefly narrated in our Annual Report for 1905 at pages 85–88 and our Annual Report for 1906 at pages 67–70. The deed by which the property was conveyed to the Society, together with other facts relating to the chain of title, are given in our Report for 1916 at pages 113–121.

Our standing committee in charge of this property consists of Mr. Frank R. Crumbie of Nyack, Chairman, Hon. Thomas H. Lee of Stony Point; Hon. Gordon H. Peck of West Haverstraw, Mr. Eugene F. Perry of Nyack, Mr. Van Wyck Rossiter of Nyack and Hon. Stephen H. Thayer of Yonkers.

### The Andre Prison House

On account of the renewed interest in places associated with Andre, we call attention again to the desirability of preserving the old brown-stone building in the village of Tappan in which Andre was confined prior to his execution.

It will be remembered that Gen. Benedict Arnold, after a treasonable exchange of communications with an anonymous correspondent in the British Army, arranged for a meeting with his correspondent in September, 1780, for the purpose of completing his plans for the betrayal of West Point. Andre went up the

Hudson river on the British sloop-of-war "Vulture," anchored off Croton Point, and just after midnight on the night of September 21–22, 1780 (Thursday–Friday), was taken to the shore on the west side of the river at Long Clove. There, in the fir trees, the plotters met and conferred until almost dawn. As daybreak approached, Arnold and Andre went to the Joshua Hett Smith house, also called the Treason House, in West Haverstraw near Stony Point (see our Annual Report for 1916, pp. 259–262). About 5 p. m. on Friday, September 22, Andre rode to Stony Point, crossed King's Ferry, and stopped for the night at the house of Andreas Miller, four miles east of Peekskill. On Saturday morning, September 23, he was captured in Tarrytown, where a monument marks the event. He was taken to Lt. Col. John Jameson's headquarters at Sands Mills, Armonk, twelve miles from Tarrytown, and was started thence for Arnold's headquarters, but upon the urgent representations of Major Benjamin Tallmadge, was brought back to Sands Mills early Sunday morning, the 24th. Thence he was taken in the afternoon to Col. Elisha Sheldon's headquarters in the Gilbert house at South Salem. Monday night, Andre was started northward for the Beverly Robinson house which formerly stood on the east side of the Hudson river, about a quarter of a mile from the water and about two miles below West Point, and which he reached at dawn on Tuesday, the 26th. The following day he was taken to West Point. On Thursday, September 28, he was taken by boat to Stony Point, and thence by land to Tappan, which he reached the same afternoon. There he was confined in the house before mentioned. The same day, Washington arrived at Tappan and made his headquarters in another old stone house which is still standing, and ordered a court martial. On Friday, September 29, the court found Andre guilty, and at noon on Monday, October 2, he was executed on the spot now owned by this Society.

A detailed description of Andre's route and capture, and of the surrounding circumstances, is to be found in Mr. William Abbatt's very carefully written book entitled "The Crisis of the Revolution." As an authentic landmark history it has great value.

The building in which Andre was confined is two stories high, and about 40 by 60 feet in size. The corners are of rough brown

stone and the intermediate walls of a grayish stone. Its greatest length is along the street. The entrance is in the middle of the front, with two windows on each side. Originally, there was only a Dutch "stoop" at the front door, just enough wider than the door to admit of a seat on each side. Now there is a piazza along the whole front. The house was built in 1755 and was long known as Casparus or Jasper Mabie's stone tavern. It remained a place of public entertainment up to about 1857.

In 1800 according to Mr. Abbatt it passed into the hands of Philip Dubey, who owned it in 1818 when Capt. Alden Partridge, U. S. A., who was Superintendent of West Point in 1816–17, visited it. Capt. Partridge described Andre's sleeping room, which was in the northwest corner of the first floor, as being 18 feet 6½ inches long, 11 feet 7½ inches wide, and 7 feet 5 inches high. There was but one window in the west wall and one door in the east wall. Andre's reception room was in the northeast corner; Gen. Greene's headquarters in the southeast corner, and the ball room in the southwest corner.

Eleven years ago, the building was vacant; the roof had fallen in, and it presented a scene of neglect and desolation. It was then and had for a long time been owned by Dr. James J. Stephens, a well-known local character. By deed dated November 18, 1897, Stephens conveyed the property to Mary Ann Pike. It fronted 61½ feet on the highway, was 250 feet deep, and contained about .34 of an acre. Soon after the property passed out of Dr. Stephens' possession it found a tenant and for several years past has maintained its original traditions as a tavern.

In 1905, the American Scenic and Historic Preservation Society made an earnest effort to persuade the Legislature to purchase the building for the State, and a bill providing for the appointment of three commissioners and appropriating $10,000 for the purpose passed the Assembly but failed in the Senate. Messrs. G. M. Williamson and F. W. Bower of Nyack were quite active in the effort to preserve the building at that time.

It was after the failure of the State to buy this property in 1905 that this Society purchased the monument site the same year.

As General Greene and many other celebrated personages have been in this house, it has many historic associations in addition

to that of Andre; and it is earnestly to be hoped that means may be found for its preservation as a public monument. The English people have bought Sulgrave Manor, the home of Washington's ancestors, as a memorial of the more than 100 years of peace between Great Britain and the United States; and it would be a graceful expression of reciprocity to preserve the prison house of Major Andre, a man without fear or reproach, who died by the verdict of a court-martial ordered by Washington and was executed according to the stern code with which the victim was familiar when he assumed his perilous undertaking.

## NEW YORK CITY CHURCHES

### Their Value as Landmarks of History

The churches of New York City are no exception to the tradition of long centuries which shows the churches to have been the conservers of history and the providers of its greatest landmarks. In these modern days, with the facilities of the printing press and the multiplicity of printed documents, the historian is not so dependent upon parish records for his materials as he was centuries ago; nevertheless the churches, by their historic continuity, and by their long-standing edifices, are yet institutional and visible landmarks by which to preserve the memories of the past and to measure the movement of time. And in a great, changing city like New York, where there is so much in secular life that is transient and evanescent, the value of the churches from the historical standpoint is especially great.

### Saint John's Chapel

For the reasons above stated, we yet hope that some means may be found to preserve old St. John's Chapel in Varick Street, New York City. The situation with respect to this interesting landmark remains as stated very fully in our last Annual Report. Varick Street has been widened, leaving the porch and part of the main building of the church now projecting beyond the building line. The church is unoccupied and neglected, and is already falling into that state of decay which presages ruin and which reflects the growing disrespect for the once sacred edifice encour-

aged in the popular mind by the indifference of Trinity Parish to its fate.

On February 8, 1918, we inquired of Borough President Frank L. Dowling as to the status of the matter, and he replied under date of February 13 as follows:

"Some time after July 1st, last summer, the Board of Estimate authorized the Borough President to remove that portion of St. John's Chapel which encroaches upon the widened portion of Varick Street. There has been no change in this authorization. There is now pending before the Board of Estimate a request for authorization to grade and pave Seventh Avenue and Varick Street. As soon as authorization is granted, I expect to take steps for the removal of that portion of the building which encroaches upon the public highway. Almost three years have been given to those interested in the removal and preservation of this building. I feel that the demands of the public for the use of Varick street as a public highway must be recognized and that it is my duty to put it in condition for such use. I expect to advertise a contract for this work as soon as the authorization is granted."

Interesting facts concerning St. John's Chapel, long forgotten, continue to come to light. In recently examining the New York Directory of 1814, we noted this paragraph, indicating the architectural rank of the church at the time of its erection:

"St. John's Chapel stands in the center of Hudson Square, about a mile and a half from the battery. It is supposed to be the most magnificent church in the United States, its steeple is lofty and is a piece of very rich and beautiful architecture. The organ is a very fine one, made in Philadelphia by James Lowe. This is also a chapel of Trinity Church. It was completed in 1810, and with the clock and bell will have cost rising $200,000."

Interest in the fate of the old building is not confined to the City of New York. In November, 1917, we received an appeal in its behalf from Mr. Elbert Wakeman of Oakville P. O., Sandgates, Md., formerly a member of the Architectural League. He writes:

"There are very few old buildings in New York, and this one has architectural merit. It could be used as a public music hall and as now for the practice of young organists. The building is singularly suited for music. Thirty years ago the finest choir in New York was there. Dr. Weston was Vicar and Mr. Le Jeune and Mr. Barron the choir masters."

On February 13, 1918, it was publicly announced that the organ of St. John's had been sold to Holyrood church, so that its use for the purpose suggested is out of the question.

### Saint Paul's New Clock

In our last Annual Report, at page 439, we made a passing mention of the removal, on April 23, 1917, of the old clock of St. Paul's Chapel, which stands in the west side of Broadway between Fulton and Vesey Streets. We are indebted to the Jewelers' Circular* of May 2, 1906, for a description of the clock which was removed. It says:

"From a historical standpoint the tower clock in St. Paul's surpasses that of "Old Trinity" being erected in 1806, some 40 years after the erection of that edifice itself. But the St. Paul's timepiece is not by any means such a handsome and conspicuous one as that of Trinity, the frame being but five feet high and somewhat over four feet deep.

"An inscription inside bears the date 1798, together with the words 'Made by John Thwaites, Clerkenwell, Lond.' Thus, with over a century of continuous activity to its credit and being at the present day an excellent time keeper, this British clockbuilder's performance was of high merit, indeed. In these days we are building probably few tower clocks that can stand the stress of New York's storms and temperature variations for a full century without a loss of but a few hours.

"The pendulum of the St. Paul's clock is 13 feet long. It is composed of wood and makes 32 beats. The ball weight is but 75 pounds, but the main wheels are from 24 to 37 inches in diameter."

Concerning the new clock installed in 1917, the Jewelers' Weekly of May 2, 1917, says:

"So rapidly and with such little commotion was this faithful old timepiece removed and a new one installed in its place, that the passing crowds on Broadway hardly realized that anything out of the ordinary was happening. Within a few hours after the old timepiece had been taken down, the E. Howard Clock Co., Boston, Mass., had installed a new clock.

* In 1906, under the caption, "How Father Knickerbocker Marks the Hours," The Jewelers' Circular published a series of articles giving the history and a general description of some of the oldest and most famous clocks in New York.

"Aside from the placing of new hands on the clock, the exterior of the timepiece remains the same. The mechanism of the clock, however, is enclosed in a specially built room, five floors below where the old clock stood. The hands above will hereafter be turned by a series of connecting rods and universal joints. The 1,400 pound strike weight will hang still another floor below with the pendulum ball weighing 200 pounds and a time weight of 500 pounds. The old bells will still remain.

"The new clock itself is a wonderful piece of work made of gleaming steel and brass, and the case hardened steel bearings and cut brass wheels should last for many years.

"The old clock just removed has been in place since 1798."

### Brick Presbyterian Church's Sesquicentennial

On Sunday, January 6, 1918, and on the following Thursday, the Brick Presbyterian church of New York celebrated its 150th anniversary.

The history of the Brick church is such an important sequel to that of the First Presbyterian church, to which we devoted much space in our Annual Report for 1917, that we have asked and received permission to reproduce, in Appendix B of this Report, the addresses of Mr. Robert Fulton Cutting and Dr. Albert R. Ledoux. For these valuable contributions we make our appreciative acknowledgments.

*Erratum:* In our Annual Report for 1917, on page 665, we stated that the present Brick Presbyterian church was dedicated October 21, 1858. The correct date is Sunday, October 31.

### Consolidation of Presbyterian Churches

In former Annual Reports we have recorded the difficulties which the Old First and the Brick Presbyterian churches had to retain their houses of worship on their present sites, in consequence of the shifting of population, the encroachments of the business district, and the tempting financial offers which have been made for the purchase of these properties for commercial use.

On February 18, 1918, an important announcement was made of a proposed plan for meeting this situation with respect to the Old First. It is nothing less than the consolidation of the congregations of the Old First at Fifth Avenue and Eleventh Street, the University Place church at University Place and Tenth Street,

and the Madison Square church at Madison Square and Twenty-fourth Street, into a single body.

The plan for consolidation was drawn up by a committee consisting of Rev. Howard Duffield, D. D., Rev. George Alexander, D. D., and Rev. Charles H. Parkhurst, D. D., pastors of the three churches respectively; and the following laymen: For the Old First church, Messrs. James K. Alexander and James Henry; for the University Place church, Mr. Waldron P. Belknap and Dr. John P. Munn; and for the Madison Square church, Hon. Robert W. de Forest and Mr. Arthur Curtiss James.

The plan was submitted to congregational meetings of the three churches on February 27, 1918, for ratification. The Old First church voted unanimously in favor of the proposal. The University Place church deferred action till April 3, and the Madison Square church laid the matter on the table.

If the consent of the congregations is obtained, the consents of the New York Presbytery and of a Justice of the Supreme Court are expected to follow.

A statement issued by the committee says:

"The purpose of this consolidation is to establish a downtown Presbyterian center, with a strong membership and endowment and with a constructive program for both church and institutional activities. It is understood that this plan, which has recently been carefully considered by the pastors and some of the officers of all three churches, has enlisted practically unanimous approval.

"While this consolidation, if effected, will create a single church organization, it is not expected that it will make any change, certainly during the present season, in the services which are now being carried on in the three churches or in their other activities. The plan looks to the future and is incident to recent changes in the residential and hotel districts of the city. The former residential district between Thirty-fourth Street and Twenty-third Street, of which the Madison Square Church is the natural center, has been almost completely given up to business uses, while the residential and hotel population of the lower Fifth Avenue and Washington Square district has increased, and this increase, under the protection of the Zoning act, seems to be permanent."

Each of the churches has an endowment of about $400,000, and the combination of the three will insure large financial foundation. If, in addition, the Madison Square and University Place

buildings are sold, there will be a material increase in the resources of the new organization. The beautiful Old First church will be preserved, and this, we are informed, was one of the important objects of the consolidation.*

### Old South Reformed Church to Go

On May 29, 1917, announcement was made in the public prints that Mr. August Heckscher had bought the property of the Old South Reformed church on the southeast corner of Madison Avenue and 38th Street, with the intention of pulling it down and erecting an apartment house on the site. The building was formerly Zion Episcopal Church, and was purchased by the South Church congregation in 1890, when it moved from Fifth Avenue and Twenty-first Street. The original South Church dates back to the historic Garden Street edifice in 1693. That Street is now known as Exchange Place. The church was torn down in 1807 and a larger one was erected, but was destroyed in the great fire of 1835.

In 1812 the South Reformed congregational separated from the Collegiate Reformed body and maintained an independent existence until about six years ago, when its new house of worship at Park Avenue and Eighty-fifth Street was sold to the Presbytery of New York City. After an existence of about 220 years the congregation of the famous South Church was disbanded. During the greater part of that time South Church was one of the strongest religious organizations in the city.

### Centennial of A. W. M. E. Church of Brooklyn

During the week from Sunday, February 3, to Sunday, February 10, 1918, the African Wesleyan Methodist Episcopal church at High and Bridge Streets, Brooklyn, celebrated the centennial of its organization. As this is the first African Methodist Episcopal church in the State of New York, the circumstances of its formation are of no little interest. From an historical sketch prepared by Mr. Henry S. Robinson, historian member of

* Later, all three congregations assented to the consolidation and on May 7, 1918, the certificate of incorporation of the united churches was filed with the County Clerk by de Forest Brothers, attorneys.

the centennial celebration committee, it is learned that before the formation of the Bridge Street church, as it is called, the Brooklyn negroes went to the only Methodist church in Brooklyn which had a white congregation, and sat in the gallery. The subject of having a church of their own was discussed among the colored people as early as 1812, but it was not until 1817, when their numbers had grown so great that they had become conspicuous in the white Methodist church gallery, that they decided to take up the project actively. A meeting was therefore held on May 14, 1817, at which the negroes of Brooklyn formed a society to raise funds to buy land for a church. They agreed to pay fifty cents a month into the treasury for a building fund. A delegation was appointed to go to see Bishop Richard Allen of Philadelphia as to sending a preacher for this new church among negroes, and ordaining several of the delegates as local preachers.

In the fall of 1817 a grand rally was held, $130 was collected and two lots were bought on the east side of High street, between Bridge and Jay streets.

On January 12, 1818, the male members of the African Wesleyan Methodist Episcopal Church in the Village of Brooklyn, County of Kings, State of New York, met and legally elected as Trustees Peter Croger, Benjamin Croger, Israel Jemison, John E. Jackson and Caesar Springfield.

On January 19, 1818, the certificate of their election was filed with Mr. Justice John Garrison of the Court of Common Pleas of Kings county and approved, and on February 7, the approved certificate of election was filed with the Clerk of Kings county; and thus the first African Methodist Episcopal church in the State was incorporated.

The congregation worshiped in a church on High street until 1854, in the meantime having established a branch church in Flatbush.

The site of the present church was formerly part of the Doctor Duffield estate. In 1829, it passed to the Pierrepont estate. On July 7, 1854, Edward and Margaret Pierrepont assigned it to the trustees of the First Congregational church, and on July 12, 1854, the latter sold it to the A. W. M. E. Church. Either on the fourth Sunday of July or the first Sunday of August, 1854, the Rev. J.

Morris Williams, pastor, led his flock from the High street church to the new church on Bridge street. The present pastor is Rev. W. Spencer Carpenter.

Not only is the Bridge Street Church the Mother of the A. M. E. Churches but it is also one of the historic spots of the country and the north. It was in this building in the days of John Brown that the abolitionists harbored the slaves being smuggled from the South through the "underground railroad" to Canada, and the cellar of the Bridge street Church was a station on the way. In their idle moments the slaves carved a man into the stone floor in the cellar and he is still there.

## CITY HALL FIRE

### Cupola Burned

On Thursday, May 10, 1917, at 12:45 p. m. fire broke out in the cupola of the New York City Hall, and in two hours completely burned its interior. The fire was attributed to a workman who had been employed in a repairing job on the roof, and who had left a fire burning in his charcoal pot when he went to luncheon. Sparks from the charcoal stove in some manner set fire to the woodwork at the base of the cupola, and before it was discovered the fire had made considerable headway. The fire produced much smoke and for a while it was feared that the whole building would be lost. The firemen, however, succeeded in confining the flames to the cupola, although the water ran down through the building and did some minor damage.

Investigation started by the Fire Department disclosed the fact that William Pray, a foreman roofer employed by the city, while superintending the roofing repair work which was being done by Charles Schlesinger, discovered a small fire among the rubbish in the roof gutter. He saw it had been caused by sparks from a charcoal furnace, and after putting it out cautioned the workmen to put out their fires while at luncheon. It was just an hour later, while the roofers were away, that the second fire was discovered.

The cupola which was destroyed was not the original one. The original cupola had been destroyed by fire in 1858, having been ignited by the fireworks which were displayed in honor of the laying of the Atlantic cable. The first cupola did not have a clock,

but the second one was made larger than the first in order to accommodate a timepiece.

Pictures of the fire of May 10, 1917, of the original design of the first cupola and of the wreck of the second cupola were given in our last Annual Report.

The fire of May 10, 1917, came at a very embarrassing time, for the City Hall was then especially the focus of public attention on account of the series of receptions of foreign war commissions which were then being held at this point. The French commission had been received with great ceremony on May 9, the British commission was due on May 11, and others were to follow. On each of these successive occasions, the front of the City Hall and the plaza were tastefully decorated, but no effort was made to disguise the wrecked cupola, and it remained a blot upon otherwise fair scenes for the remainder of the year.

The delay appears to have been due to several causes. Soon after the fire, Borough President Marcus M. Marks retained Mr. Grosvenor Atterbury, the architect who had charge of the interior restorations described in our Annual Report for 1916, to prepare plans for a new cupola.

Two days after the fire, the New York Evening Sun called for the reproduction of McComb's original design in the new cupola. Referring to the change made after the fire of 1858, the Evening Sun said:

"Since this change in the original appearance of the building was made New York has learned to treasure City Hall as an artistic and historical monument beyond value, and recently the interior of the building has been done over in conformity with the McComb plans, which have been preserved through a miracle of chance. Thus the building itself has been restored to its nineteenth century beauty, departures from which will not be permitted in the future.

"Now that another rebuilding of the cupola has been made necessary, the city government should require adherence to the original designs, and the structure replacing that burned on Thursday should represent McComb's ideal."

This suggestion struck a popular chord, and found sympathy with the Municipal Art Commission, whose approval was necessary. But as the McComb design included no provision for a clock, public discussion arose on the question of "clock or no

clock." Hundreds of thousands of people who passed the City Hall very day were accustomed to glance at the clock, and the question at issue was one between artistic sentiment and harmony of design on the one hand and public convenience on the other. The sentiment in favor of the clock predominated and the plans were amended accordingly. Another contention arose over the question of material, one suggestion being that it should be of wood, "the material of the period," and the other that it should be fireproof. The Bureau of Buildings decided this issue by refusing to approve the inflammable construction, and the plans were again changed so as to provide for a structure of steel, concrete and sheet copper, following the outline of the original tower, but with openings in the windows for clock-dials. As these dials had to be smaller than those lately destroyed, further discussion arose on the subject of the size of the clock-faces, the President of the Board of Aldermen characterizing the proposed clock as a "wrist-watch."

At length the plans were approved and the Board of Estimate appropriated about $63,000 for the work. Bids were advertised for, and on December 27, 1917, over seven months after the fire and four days before the City administration went out of office, the bids were opened in the office of Borough President Marks.

Among fourteen bidding contractors P. T. Cox was low with the figure $45,335. This sum with a separate low bid from Philip & Paul of $1,697 for plumbing puts the matter well within the appropriation of about $63,000. These two contracts do not include placement of the clock, which will be done in another letting when the cupola has reached the proper stage.

On January 1, 1918, Hon. Frank L. Dowling became President of the Borough of Manhattan and notified the successful contractor to begin work at once. On Saturday, January 5, the work of removing the charred skeleton of the burned cupola began, and in a few days the City Hall looked at least respectable, if not complete, with all vestiges of the tower removed. The work of reconstruction must be finished before July 1, 1918.

From the ridge of the roof to the top of the figure of Justice on the cupola it will be almost fifty-eight feet, the statue itself being a little less than ten feet tall. The general width of the

tower will be fourteen feet, with the windows about twelve feet in height and wider than the former ones. There will be no flagpole on the new tower, but the City Hall will have four without this one. The same statue that was on the old cupola will be used and maybe the same clockworks, both of which survived the flames.

It is proposed to place in the cupola the town bell that once hung in the village of Tremont in the Borough of the Bronx. The bell was cast about 40 years ago and weighs 1500 pounds. It is 37 inches high and 42 inches in diameter at the rim. The bell has been owned by the city for 25 years but has not been used for many years. It reverted to the city when the Bronx was added to Greater New York and before that it hung in the belfry of the meeting house in the village of Tremont. It was the village alarm for fires, town meetings, and, in fact, all public gatherings of the citizens of Tremont.*

## NEW YORK COUNTY COURT-HOUSE

### Project for New Edifice at a Stand-still

On January 23, 1918, the Hon. Bernard Downing of New York City introduced in the State Senate a bill (introductory No. 184) "to abolish the Court House Board of the City of New York, to transfer its powers to the Board of Estimate and Apportionment of such city, and to provide for the disposition of the property heretofore controlled by such Court House Board." The bill provided that the Board of Estimate could cause the land acquired for the new court house to be abandoned for that purpose and sell it or apply it to other public uses.†

This movement to abandon the new court house project was foreshadowed at the time of the municipal election in November, 1917, when the administration of Mayor Mitchel was attacked by his rival candidate for alleged extravagance in connection with the court house plans. (The history of the development of these plans

* The bell was hung in the steel frame skeleton of the new cupola on Saturday, April 13, 1918. It struck the hours and was tolled for the first time in its new position on the day of the funeral of ex-Mayor Mitchel, Thursday, July 11.

† The bill failed to pass.

has been given very fully from year to year in the Annual Reports of this Society.) On November 4, 1917, a statement signed by Mayor J. P. Mitchel, Comptroller William A. Prendergast, and Ex-President of the Board of Aldermen George McAneny, was made public in justification of the course pursued. The statement will be found in full in the New York Times of November 5, 1917. The essential parts of it, containing an excellent summary of events and an explanation of the delay in building, are as follows:

"The agitation for a new Court House to replace the dilapidated Tweed structure was commenced fifteen years ago. The legislative act providing for the appointment of a Court House Commission, and requiring the city to provide funds for a site and building, was Chapter 336 of the Laws of 1903. Amendments to this act, making its provisions more mandatory and setting a time limit of six months for the selection of a site, were passed in October, 1911, when Judge Gaynor was Mayor, and whatever has been done since was done in pursuance of legislative direction.

"The Corporate Stock Committee of the Board of Estimate, then composed of Mr. Prendergast, Mr. Mitchel, and Mr. McAneny, was opposed to the plan, and favored the reconstruction of the present building.* The Judges, various citizen bodies, and a large portion of the press held the other view, and the Legislature, at their instance, ordered the work ahead.

"The site taken† was the cheapest and the most convenient that could be found. It was selected under the advice of a committee consisting of some of the best architects and engineers in the city, and approved by everybody else officially concerned. Later engineering investigations showed that the Collect Pond as an element in the foundation work was a myth. After several hundred borings had been made, the Chief Consulting Engineer, Daniel E. Moran, reported:

"'I have no hesitation in saying that natural conditions at the site are favorable for a cheap and entirely safe foundation, and that the plans provide adequately for the support of the building. . . . Compared with conditions elsewhere on Manhattan Island south of Fourteenth Street, I have no hesitation in saying that for economical and satisfactory foundations no more advantageous site of equal extent could be found.'

* The Tweed Court House on the north side of the City Hall in City Hall Park.

† Bounded by Leonard, Lafayette, Baxter and Park Streets.

"In order to avail itself of the new principle of excess condemnation, that had just been incorporated by the vote of the people in the Constitution of the State, the city deliberately took more land than it needed for the building itself, proposing to sell the 'excess' sections at the higher figures the improvement would create. It was to enable the city to save money in this business-like way that the constitutional amendment had been passed, although the Court House act expressly permitted it. Nothing, however, is to be held for 'civic center' purposes and, so far as the Board of Estimate is concerned, nothing of the sort was intended to be held. The net cost of the site, after the sale of the remainders, has been figured by real estate experts at from $7,000,000 to $8,000,000. The sites under consideration of the Court House Board before this selection was made were figured at from $12,000,000 to $18,000,000.

"The selection of plans for the building was left by the law entirely to the Court House Board appointed by Mayor Gaynor and to the Judges of the Supreme Court. In the manner the law provided they selected the round type of building, and appointed Mr. Guy Lowell as architect. The Board of Estimate retained, however, the veto power on costs. When the estimates on Mr. Lowell's plans were reported to be around $15,000,000 the Board of Estimate served notice on the Court House Board that they must be cut to $10,000,000, the figure fixed at the time the act of 1911 was passed. This was done, the plans being entirely remodeled to permit it. Later the Board of Estimate insisted on a further cut to $7,500,000. At the time Mr. McAneny left the board this was the situation.

"When in March, 1916, the Court House Board pressed for an appropriation in this amount, conditions had changed. The mounting costs of steel and other construction, due to the war, threatened to drive the total cost of the building to prohibitive figures. Coincidently, the city's borrowing margin became greatly reduced through demands of the Public Service Commission for further appropriations for subways, in excess of their original estimates. The Board of Estimate concluded that it would be good business to wait until these conditions had passed; and that the loss in carrying the idle land for a year or two would not be comparable to the loss that immediate construction would entail.

"These are the facts. No values in the property will be lost. The Board of Estimate was, however, required by law to buy a site, and it has been in no way responsible for the delays that have occurred in putting that site to use. As soon as it is possible, the work of building will, no doubt, proceed, unless the Legislature undoes what it has heretofore done. The site has not been abandoned, and could not be."

During the past year the vacant lots and cellar excavations left after the removal of the buildings from the Court House site have been largely filled up and the surface is being graded at the time of this Report.

## THE OLD COLONNADE OF LAFAYETTE PLACE

### Correction of Date of Erection

In our last Annual Report (1917), at pages 140–142, we gave a sketch of the block of columned houses standing at Nos. 428, 430, 432 and 434 Lafayette street, New York City (formerly Lafayette place), formerly called Colonnade Row, or La Grange Terrace. Having stated that it was built in 1838, we are favored with a note from Mr. Hopper Striker Mott, who calls attention to an article by him in the New York Sun of January 13, 1918, in which, he says, he proves that the block was erected in 1831.

## MACOMB LANDMARKS

### The Macomb Family

Two events in 1917 combined to direct attention to landmarks of the Macomb family who took conspicuous parts in the history of the United States, the State of New York and the City of New York. One was the celebration of the completion of the Catskill Aqueduct, and the other was the threatened destruction of the Macomb mansion on the northwest corner of Broadway and 230th street, New York City. In Appendix E of this Report we give, by courtesy of Mr. Macomb G. Foster of New York, a copy of Robert Macomb's proposal to the Common Council in 1819 to bring a water supply into the city from Rye pond and Bronx river, and in the following pages we give some other data, partly furnished by Mr. Foster, concerning other landmarks of the Macomb family and particularly of Alexander and Robert Macomb.*

* The name was also spelled McComb. For the sake of uniformity we have adopted the spelling Macomb except in direct quotations in which it was written otherwise.

*Ancestral Family*

Alexander and Robert Macomb's forefathers lived at the family seat at Dunturkey, parish of Ballynewn, county of Antrim, Ireland.

*First Generation in America*

John Macomb, the immigrant ancestor, came to America in 1755 and settled at Albany, N. Y. He brought with him two sons and one daughter, namely:

*Second Generation in America*

Alexander Macomb, who married first Catherine de Navarre, and second Christina Livingston, daughter of Philip Livingston of New York:

William Macomb, who married and had a daughter Catherine Macomb mentioned below; and

Anne Macomb, who married first Col. Francis von Pfister of the British army and second Capt. Thomas Bennett of the same service.

Catherine de Navarre, Alexander Macomb's first wife, was descended from distinguished French ancestors who settled at Quebec, Canada, in 1682. Her father, Robert de Navarre, was of noble family, and a man of great learning. He was sub-delegue and notaire royale under the French government at Detroit. He married Madam Bourrois, mother of Catherine de Navarre, above-named.

Alexander Macomb of the second generation, above-named, bought from the State of New York, in 1792–1798, at eight pence per acre, 3,934,899 acres of land in the Adirondack region known as Macomb's Purchase. This enormous tract of land is one of the great real estate landmarks of northern New York. It is indicated on the State map of the Adirondack Forest Preserve and is referred to innumerable times in the State Land List. The name of Macomb, or Macomb's Purchase, is perpetuated to this day in almost every real estate transaction connected with this great area. (See facsimile maps and field notes of original survey in the Annual Report of the State Engineer and Surveyor for the fiscal year ended September 30, 1903; also page 198, Book 18 of Land Patents, in the Secretary of State's office at Albany; also

page 284 of the Annual Report of the American Scenic and Historic Preservation Society for 1916.)

Alexander Macomb had the following children:

*Third Generation in America*

By Catherine Navarre, his first wife:

John Navarre Macomb, who was killed in action at sea with a French corsair on his way from Lisbon to London.

By Christina Livingston, his second wife:

Anne Macomb, who died young.

Jane Macomb, who married Hon. Robert Kennedy, third son of the Earl of Cassilis.

Catherine Macomb.

William Macomb.

Sarah Macomb, who married Arent Schuyler de Peyster of New York.

Alexander Macomb, who was born in Detroit, April 3, 1782. He married his cousin Catherine, daughter of William of the second generation, and became Major General in the United States army.

Robert Macomb, Colonel in the New York Militia. He married Mary Pell of New York.

Anne Macomb (2d), who married William Wilson, a New York merchant.

### Acquisitions at Paparinemin, King's Bridge

About the year 1798, Alexander Macomb (of the second generation),— he who had acquired such an extensive tract in the Adirondacks,— began to acquire the historically and once geographically interesting tract bordering on the north side of Spuyten Duyvil creek, known as Paparinemin.

This tract was virtually an island, being bounded on the south by Spuyten Duyvil creek (sometimes called Harlem river); on the west and north by a creek called by the Indians Mosholu* and by the white men Yonker's creek, and Tibbett's or Tippetts brook, which rose east of Yonkers and emptied into the Spuyten Duyvil creek on the southeast side of Spuyten Duyvil hill; and

* Bolton's Hist. Westchester Co., ii, 613.

on the east by a tidal inlet connecting the north end of Harlem river proper with Yonkers creek. This island or hummock land extended northward to the upland of Van Cortlandt Park. Spuyten Duyvil creek and the inlet on the eastern side have been filled up in recent years, and Tippett's brook is a mere rudiment of its former self.

The name of this tract is variously spelled in old records as:

| | | |
|---|---|---|
| Paparinamin | Papirinemin | Paprinimen |
| Paparinemin | Paparinimin | Paprinnemin |
| Paparinemo | Papparinamin | Papurinimon |
| Paparinnemo | Papparinemo | Peperiniman |
| Paperinemen | Paprinemin | |

This is an Indian name, which has been given two interpretations. One interpretation is that it means *place where the stream is shut.* William Wallace Tooker thinks it means to *parcel out* or *to divide.* Rev. Robert Bolton, author of the History of Westchester County, applied it to Spuyten Duyvil creek, and had for justification the description in 1682 which referred to a creek called "Papparinemo which divides York Island from the main, and so along said creek or kil as it runs to the Hudson's river." The name was also applied to the island or hummock land above defined. In an agreement between Gov. Lovelace and Johannes Verveelen for a ferry at Spuyten Duyvil in 1669, is a reference to "the Island or Neck of Land known by the name of Papparinamin." (Riker's History of Harlem, pp. 253–254.) A few years later, in a claim of John Archer, proprietor of Fordham, it is alluded to as a "neck of land, Hummock or Island commonly called Papirinemin." In the grant of Fordham Manor, there is a reference to "the first point on the mainland to the east of the island Peperiniman." It thus appears, as Tooker pointed out, to have been applied to both the creek and to the island north of it, but as time went on, its application was mainly to the island.

The history of Paparinemin, from the ownership of Adrian van der Donck down through the tenure of the Lords of the Manor of Philipsborough to and through the American Revolution, would make a book in itself. The communication between Manhattan Island and Paparinemin prior to the building of Kings Bridge was by fording and ferry. The building of the bridge by Frederick Philipse in pursuance of his charter for Philipsborough

Manor in 1693 gave to that locality the name of King's Bridge, which has clung to it ever since.

On the north side of Spuyten Duyvil creek, at what is now the northwest corner of Broadway and 230th street, there has stood one or more successive buildings from time immemorial dedicated much of the time to public hospitality. The site is about 600 feet southeast of the northern end of the original King's Bridge and almost directly opposite the northern end of the more modern King's Bridge, both of which bridges have now disappeared. Being directly on the main highway to Albany, it was a most eligible place for a tavern. It is believed that this is the site of the tavern of the ancient ferryman Johannes Verveelen. On March 2, 1669, the Mayor and Aldermen voted to change to Spuyten Duyvil the ferry which Verveelen had conducted at Harlem for two years. Verveelen was authorized to fence the lands at the "wading place" so that cattle and people could not cross without paying toll; "and at his best conveniency to lay out a place upon that piece of land called Papparinamin on the main side near unto the said passage, for habitation and accommodation of travellers." (Riker's History of Harlem, pp. 253–254.) After the grant of the Royal Charter of the Manor of Philipseborough (1693) which established the King's Bridge across Spuyten Duyvil Creek, Frederick Philipse kept a conveniency on what is believed to be the same site, and it was here that Cox's tavern stood at the period of the Revolution.

Certain references to Cox's tavern and the probability that Washington was a guest there will be found in the Annual Report of this Society for 1914 at pages 265–266. Another incident connected with this tavern not generally known is recorded in the "Journals of Capt. John Montresor of the British army" published in the Collections of the New York Historical Society. In reciting the services for which he claimed special recognition, he says:

"My hearing that the Rebels had cut the King's head off the Equestrian Statue (in the Centre of the Elipps,* near the Fort) at New York, which represented George the 3rd, in the Figure of Marcus Aurelius and that they had cut the nose off, clipt the laurels that were wreathed round his head, and drove a musket

* Bowling Green.

Bullet part of the way through his Head, and otherwise disfigured it, and that it was carried to Moore's tavern,* adjoining Fort Washington on New York Island, in order to be fixed on a Spike on the Truck of that Flagstaff as soon as it could be got ready, I immediately sent Corby through the Rebel Camp in the beginning of September, 1776,† to Cox, who kept the Tavern at King's Bridge, to steal it from thence and to bury it, which was effected, and was dug up on our arrival, and I rewarded the men, and sent the Head by the Lady Gage to Lord Townshend, in order to convince them at home of the Infamous Disposition of the Ungrateful people of this distressed Country."

In 1785, the Manor of Philipsborough was sold by the Commissioners of Forfeiture,‡ and the Paparinemin tract went to Joseph Cook, inn-keeper, Daniel Birkins and Abraham Lent in joint tenancy. Subsequently it passed through other hands until about the year 1798, when Alexander Macomb of New York City began his acquisitions there which aggregated about 100 acres.

Upon the ancient tavern site the Macomb's built a fine stone mansion 50 feet square, which embodies, it is believed, portions of its historic predecessors. After the Macomb ownership, the house was for many years the residence of Joseph Godwin, and it is now popularly called the Macomb-Godwin house. In 1917, it was announced that the house was to be torn down and an apartment house erected on the site. (See illustration of the house in our Annual Report for 1914, plate 18.)

### Macomb's Mill at King's Bridge

The originality and enterprise of the Macombs was reflected, not only in their acquisitions of land, but also in their plans for the use of water. Alexander and Robert both seem to have had quite a notion of hydraulics. Of the latter's project for supplying New York City with water we have spoken at length in another part of this Report (Appendix A), but that foresighted and not impracticable project has almost been forgotten. Another project of the Macombs, however, which was quite impracticable, has left its impress on the nomenclature of the city in the name of Macomb's Dam bridge which is still frequently applied to the viaduct over the Harlem river at 155th street.

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* The Blue Bell, at what is now Broadway and 181st street.

† The statue had been pulled down July 9, 1776.

‡ See "Philipse Manor Hall" by Edward Hagaman Hall, page 183.

Lying back of the name Macomb's Dam is the history of an ingenious project for utilizing the power of the tidal waters of the Harlem river. This involved the construction of practically three dams — the first across Spuyten Duyvil creek at King's Bridge, the second across the Harlem river at 155th street, and the third across Yonkers creek near its confluence with the Spuyten Duyvil. The first, if not literally a dam, was one in effect. The first and third are almost forgotten, while the memory of the second is perpetuated, as above stated, in the name Macomb's Dam bridge.

With respect to the first of these, in 1800, Alexander Macomb applied to the Common Council for permission to use part of Spuyten Duyvil creek at King's Bridge for a mill, and on December 22, 1800, the Common Council authorized the affixing of the city seal to the engrossed grant. At an annual rental of only $12.50, he was granted the use of the creek to low water mark on both shores for a distance of 100 feet west of the bridge, on condition that a passage way fifteen feet wide should be kept open for boats. Apparently this provision was ignored, for Macomb built a five-story grist mill* on the north shore extending over the creek itself upon the ebb and flow of whose waters he depended for his power.

The location of this mill west of the old King's Bridge may be judged from the location of the bridge, which crossed Spuyten Duyvil creek between the northern end of the present Marble Hill avenue and the southern end of King's Bridge avenue.

### Macomb's Dam at 155th Street

In 1810 the property was sold under foreclosure and was bought in by Robert Macomb, who, in 1812, secured from the Legislature authority to build a dam across the Harlem river from Bussing's point on Manhattan Island to Devoe's point on the Westchester county side, the Manhattan end being at 155th street between 7th and 8th avenues. His idea was that by impounding the water of the Harlem river between this point and King's Bridge he could develop more power.

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* In 1855 the mill, which had long been unoccupied, was declared dangerous and a public nuisance. Steps were taken to convert it into a hotel, but a heavy wind blew it down, either in 1855 or 1856. (The Story of the Bronx, Jenkins.)

In August, 1813, about fifty prominent citizens, representing the inhabitants of Westchester county, presented a petition to the Common Council asking it to authorize the construction of a bridge on the dam. From the original petition, loaned to this Society by Mr. Macomb G. Foster, we copy the following:

To the Mayor, Aldermen and Commonalty of the city of New York.

The petition of the subscribers, inhabitants of Westchester county respectfully sheweth

That your petitioners understand that the legislature passed a law, at their last session, authorizing Robert Macomb to build a dam at Devoe's point, and have understood, with great satisfaction, that Mr. Macomb is willing to erect a bridge on his dam and to demand one half only of the toll taken at Coles' bridge, and to pay one half the income of the bridge to the Corporation of New York, for the education of the poor. Your petitioners represent that the inhabitants of Westchester County have for ten years past been anxious to get a bridge, at Devoe's point, and have used every honest means to effect that object, but have uniformly been disappointed. Your petitioners represent that the erection of a bridge at Devoe's point, will greatly shorten the distance between the central parts of Westchester County and New York, and that a toll diminished one half will be a great public convenience.

Aug. 1813.

| | | |
|---|---|---|
| Timothy Purdy | Jonathan Varian | Elisha Pease |
| Francis Fowler | Benjamin Underhill | George Farrington |
| Joseph Hart | George Donovan | Alexander Fowler |
| Besalom Cudner | Caleb Tompkins | Thomas Oakley, Jr. |
| William Palmer | W. Popham | Andrew Purdy |
| Joseph Malice | Samuel R. Dixon | Andrew Purdy, Jr. |
| William Fisher | Richard Cornell | Gilbert Shute |
| James Miller | Jonathan G. Tompkins | Richard Shute, Jr. |
| Joseph Hatfield | David Bonnett | Aaron Hunt |
| Elijah Crawford | Jonathan F. Fowler | Moses Serren |
| Francis Sniffen | Bishop Underhill | Basel Hunt |
| Thomas Cornell | John Tredwell | Irenus How |
| James J. Cornell | Richard Cudner | Joseph Farrington |
| John Bonnett | Patrick F. Tighe | Moses Farrington |
| Stephen Bates | Isaac Townsend | Anthony Valentine |
| Joshua Underhill | Lewis Odell | James Crawford* |

* Some of these autograph signatures are difficult to decipher and are given above as accurately as possible.

On July 8, 1816, the Committee on Roads of the Common Council reported that "Coln. Macomb has built a permanent Bridge across Harlaem River from Bussings Point to Devoes Point near the termination of the 8th avenue whereby a direct communication is made with the heart of Westchester County and a new passage opened into this City, that contemplating the course of the roads connected with this Bridge on the Westchester side its central position being about midway between the Sound & Hudson River and other advantages thereon — Your Committee cannot avoid declaring this enterprise worthy the attention of the Corporation." The committee therefore recommended working the road adjacent thereto in order to take advantage of the bridge.

The closing of the Harlem river, which was a navigable stream, without the consent of the United States government led to litigation which resulted eventually in the removal of the obstruction.

### The Yonkers Creek Dam

Meanwhile, on February 16, 1815, a petition was presented to the Assembly at Albany reading as follows:

To the hon'ble the legislature
of the State of New York.

The petitioner most respectfully prays that an act may be passed authorizing a bridge to be built across Yonkers creek in Westchester county, agreeably to the petition of the inhabitants of the town of Yonkers, herewith submitted.

Robert Macomb
Feb. 14, 1815.

This was read and referred to the members from Westchester county, and upon their favorable recommendation, the following bill was passed March 10, 1815:

> An Act to authorize the building of a bridge across Yonkers creek in Westchester County.
>
> Passed March 10, 1815.

Be it enacted, by the people of the State of New York, represented in Senate and Assembly, that it shall and may be lawful, for Robert Macomb of the city of New York, Esquire, his heirs, and assigns, to make, build, and construct, a good and sufficient

bridge across the creek commonly called Yonkers Creek, which empties itself into the Spuytendeuvel Creek, westerly of the Mill of the said Robert Macomb situated at kingsbridge, in Westchester County; which bridge shall be built across said Creek, at the place where the old bridge formerly stood, and shall be of a width not less than fourteen feet, and may be so constructed, as to dam the said Yonkers Creek; the said bridge and dam to be so constructed, and at all times upheld and maintained, as not to cause the waters of the said Creek, or which may come up the same by the flow of the tides, to remain on, or to overflow, or drown, the Salt Meadows or other lands of any person or persons, other than the said Robert Macomb his heirs or assigns, for any greater length of time, or to any greater extent, than the said waters have heretofore remained on, or overflowed, or drowned such lands:

And be it further enacted, that the said Robert Macomb, his heirs and assigns, shall make, construct, and keep in repair, and good order, at such dam and bridge, a sufficient lock, of a width not less than six feet, and of a length not less than twenty four feet, or a gate, or other contrivance,— whereby skiffs, or boats, may at all times pass such bridge, and dam, and that the said bridge and dam, and lock-gate or other contrivance, shall be built, erected and maintained and kept in repair, at the sole expence of the said Robert Macomb his heirs and assigns: and all persons with their teams, carriages, cattle and boats, shall at all times, be permitted to use and pass the same free of every Species of toll, demand, charge and exaction, whatsoever.

And be it further enacted That if the said Robert Macomb, his heirs or assigns, shall not erect and complete such bridge and dam, with such lock gate, or contrivance, as aforesaid, within the space of Two Years, or shall not keep the same in such repair, order and condition, that the same may be safely passed, then the privileges hereby given, shall utterly cease: and also, that if the said bridge, and dam, shall cause the waters of the said creek, to remain on or to overflow, or drown, any lands contrary to the true intent and meaning of this act: then, and in such case, the said bridge, and dam, shall be held and considered a nuisance; and may be proceeded against, in all courts and places, accordingly.

And be it further enacted, that the said Robert Macomb, his heirs and assigns forever, (unless the said bridge and dam shall as aforesaid be considered and declared a nuisance) have, hold and enjoy, the sole right and privilege of using and employing, for milling and other purposes, the tide waters of the said Yonkers creek, either by using and employing, the same, at, or near, the said bridge, and dam, or by communicating the said waters of said Yonkers Creek and those of the Spuytendeuvel or the Harlem

Creek, through the lands of the said Robert Macomb, his heirs and assigns.

### Description of Macomb Estate

It is to be observed that the project above authorized contemplated a dam across the mouth of Yonkers creek or Tippett's Brook, and was apparently to be used in conjunction with the dam at 155th street to impound more effectively the water for the use of the mill at King's Bridge. The whole project, however, proved to be unprofitable, and becoming involved financially, Robert Macomb endeavored to borrow $30,000 from Aaron H. Palmer, giving as security his King's Bridge estate and water rights. Through the courtesy of Mr. Macomb G. Foster we are able to reproduce Macomb's proposal to Palmer, which contains an interesting description of his property. It reads as follows, being without date:

To Aaron H. Palmer, Esqr.

The property which I proposed to you, as security for the loan of $30,000 consists of what is called the Kingsbridge Estate, situated at the end of the island of Newyork, 12 miles from the city-hall, lying partly in the city and county of Newyork, and partly in the county of Westchester. It consists of

*1.* The farm at Kingsbridge, comprising 100 acres of excellent land. On it are a large, double, stone mansion 50 feet square; a very spacious modern coach house and stable; a farm house; green house; millers-house; cooper's-house &c., &c., all in complete order. The whole of this farm is a mass of marble, specimens of which are to be seen in the marble buildings of Newyork. The quarries are advantageously situated, being a few rods from navigable waters, whereby a direct water communication is had with the city: and the marble can be afforded cheaper than any other stone which goes to market, the cost thereof to the proprietor, being the labor, merely of getting it out of the quarry; and this can be done very reasonably by contract. This farm is called, " The Island," having been originally such. It is now surrounded by water on three sides, as follows; on the south by Harlem-river; on the west and north by Yonkers-river; on the east the water has been dammed out, and the ground converted into meadow. The Harlem-river and Yonker's River, form the boundary on the three sides. Every species of fruit known in this climate, is in abundance, here. The orchard is very extensive. Upon the whole, this farm is considered, taking into view all its advantages, its soil, its acces-

sibility by water; its proximity to the city &c., to be one of the most valuable near this city.

*2.* The mill contiguous to the above described farm, which mill is known as " The Newyork-City-Mills ". It is 85 feet by 45 feet 5 stories high, with nine run of stones, and all the modern patent labor-saving machinery, all in perfect order. The mill extends across Harlem-river; and is on navigable water; the mill boat of 45 tons coming directly under her elevators. By means of machinery, the mill dispenses almost wholly with manual labor, one man being capable of attending her when in full operation. The mill discharges the boat, transports the grain, feeds the stones, transports the meal, &c. It cost upwards of $30,000; and is now worth that sum, at least, agreeably to a written estimate made by Sam[l]. Mott and Mr. Redmond, flour-merchants, and Wm. Thom then flour-inspector of Newyork, which estimate was made for the insurance companies. From the peculiar advantage of this mill lying wholly in the city of Newyork, it is devoted exclusively to the domestic business of the city, and is now employed in grinding for certain respectable distillers, who allow 8 cents clear profit, on every bushel ground and delivered, the mill averaging throughout the year between 300 and 400 bushels per day: altho' frequently grinding 1000 bushels pr. day. All things taken into view, the excellence of this mill and her machinery, its proximity to our metropolis, her great capacity, the extent of her water-power, comprizing 5 miles of Harlem river (all of which is in the city of Newyork) the excellence of the navigation by means of Hudson-river, this mill may be pronounced safely, among the most valuable in the state of Newyork.

*3.* The sole and exclusive right of using and employing the waters of Harlem-river for milling and other purposes, granted by The People of the state of Newyork and by The Mayor, aldermen and commonalty of the city of Newyork. This grant comprises all the water of the Harlem-river lying between Macomb's-dam, and Kingsbridge, being five miles of that river. The value of this grant may be duly estimated, by considering that, by means of Macomb's-dam erected across said river, at the termination of the eighth avenue, eight miles from the city, an extensive lake is created, the waters of which discharging themselves into the north river, at Kingsbridge, furnish endless sites for such manufacture, as are inseparable from the growth and convenience of the city of Newyork. And this great water-power, lies wholly in that city. A reference to the large map of the city of Newyork, will show the extent and magnitude of this water power.

*Insurance.* to the following amount will be assigned

| | | |
|---|---|---|
| 1 | On the mill | 15000 |
| 2 | " " dwelling house | 3000. |
| 3 | " " coach house &c | 1000. |
| 4 | " " green house | 1000. |
| 5 | " " millers-house | 500. |
| 6 | " " farm house | 500. |
| 7 | " " coopers-house | 500. |
| | | 31500. |

*The Revenue* of the property may be stated, as follows

| | | |
|---|---|---|
| 1.st | of the mill | 5000 |
| 2.d | grant of a water privilege to J. & C. Bolton | 700 |
| 3.d | Farm . . . . . | 500. |
| 4.th | 3 houses at 60 | 180 |
| | | 6380 |

The title, will be free, clear, and unquestionable.

Robert Macomb was finally sold out by the sheriff, and his property and franchises passed into other hands. His enterprises, however, were large and original, and although unsuccessful financially, indicate the breadth of conception and the substantial character of the man as a citizen.*

## THE POE COTTAGE

### Description of the Cottage and its Rehabilitation

The home of Edgar Allan Poe during the last part of his life, within the walls of which much of his best literary work was conceived and executed, has for many years attracted the interest and sympathetic attention of the literary world. It occupied a site upon the east side of the Kingsbridge road, between the present 192nd and 193rd streets, in the old village of Fordham, now incorporated into the Borough of the Bronx, New York City.

The encroachments of modern apartment buildings on either side left the little dwelling crowded in a narrow space between

* The subsequent history of Macomb's dam at 155th street is summarized in an interesting way in Jenkins' "Story of the Bronx."

high walls, detracting from its appearance, and affording no means of an appropriate "setting" in keeping with its original character. The widening of the Kingsbridge Road involved the removal of the cottage from its original site. Thus upon the acquisition by the City of New York of the area now known as "Poe Park," the small building was acquired and removed, June 9, 1913, across the roadway to a position in the park about three hundred feet north by west of its original site. (Concerning the saving of the Poe Cottage see the Annual Reports of the American Scenic and Historic Preservation Society as follows: 1900, p. 24; 1901, pp. 43, 44; 1902, p. 61; 1912, p. 295; 1913, pp. 147–150; 1914, pp. 149–150.)

Standing thus in park property, the custody and care of the cottage was entrusted by the Department of Parks of the Borough to the Bronx Society of Arts and Sciences, which organized a committee-in-charge, of which Mrs. A. C. Fisk was appointed and has continued to act as Chairman.

For the following account of the work of this committee in its care of the building and in arrangements for its public inspection, we are indebted to Mr. Reginald Pelham Bolton, Chairman of the Sites and Inscriptions Committee of the American Scenic and Historic Preservation Society and a member of the Poe Cottage Committee of the Bronx Society of Arts and Sciences. The latter committee includes Mrs. A. C. Fisk, Mrs. C. D. Dickey, Mrs. William Niles, Miss Mary Wray, Mr. Charles W. Stoughton, Mr. William Niles, Mr. Reginald Pelham Bolton, Mr. E. B. Child.

There have been no funds available from municipal sources for any purpose of the committee, except for the provision of fuel, gas, and such repair work as painting and plumbing. The committee found itself without any means for the support of a caretaker, or for effecting any changes or furnishings in the cottage. A printed appeal was prepared setting forth the needs and program of the committee, as a result of the circulation of which, a sum of nearly two thousand dollars was subscribed, the largest part of which was a generous gift from Mrs. Russell Sage.

The committee was thus enabled to secure the services of the present caretakers, Mr. and Mrs. William H. Shaw, whose education and tastes render them entirely in sympathy with their sur-

roundings, and enable them to meet with intelligent information the enquiries of the increasing number of visitors to the cottage.

The cottage was placed in its present position upon a stone basement, constructed to provide living quarters for the caretaker. In this basement, which is about nine feet below grade at the west end, and about four feet below at the east end, is a single large room, a toilet-room, a small kitchen, and a space for a heating boiler. The kitchen is provided with a coal range, with a hot-water boiler, a small gas range. The heating system is a hot-water circulating apparatus, with radiators in the Cottage rooms above.

The removal of the cottage was effected without much injury to its construction. The fireplace and chimney of the kitchen either collapsed, or were removed, and a brick flue was built from the basement kitchen, occupying one-half of the old fireplace space, fortunately leaving intact the old chimney breast and its two quaint china-closets above the mantel.

There was a lean-to addition attached to the exterior of the kitchen on its east side, which was removed and was not replaced, leaving the cottage shortened to that extent, and detracting from its appearance in its new surroundings. The building is also set higher above the grade of the land than it used to be, and the lack of the lean-to addition was thereby made more evident. The committee therefore decided to restore the lean-to as soon as it could be done.

The building consists of two parts, the original cottage and its kitchen, which latter by careful examination and comparison of the materials, is judged to have been added at some later date than the original construction. This kitchen extends the full width of the building and is about nine feet in width, constructed as a lean-to, its floor being about five inches lower than that of the parlor, to which access is obtained by a doorway on the east end of that room, which has evidently been cut through at the time of the construction of the kitchen, as its door is of a form of construction similar to that used in the kitchen.

The fireplace of this kitchen was, as previously remarked, destroyed during the operation of removal. It was an open hearth with a brick arch having an opening about three feet six inches wide, the hearth being paved with brick. The mantel is of wood,

in part of the original material, and on either side above the slab is a little closet of very crude materials, and furnished with a swinging door which was evidently utilized for the storage of utensils. Another closet was constructed in the northeast corner of the kitchen, having a door divided in two parts.

In connection with this fireplace it is interesting to note that as a result apparently of a lack of sufficient fuel, or possibly by reason of some defects in the chimney, this kitchen fireplace was abandoned by the Poe family, and a little cooking stove was substituted, the smoke pipe of which passed through a small round opening in the wall, and was thus connected into the flue of the parlor fireplace. This little hole is said to have been made by Poe himself, and is now visible.

Under these circumstances, the closing up of the kitchen fireplace, which has been done as a result of the removal, is not wholly inappropriate. This kitchen was entirely of frame construction, plastered inside and ceiled with plaster. The roof was shingled, but at present is covered with a tin roof of more modern character.

The original cottage building comprised the parlor and a very small chamber on the ground floor. The southwest angle of the building is occupied by the main entrance door which was its only original means of access, and also by the winding staircase which is enclosed with a partition, and old-fashioned door leading to the attic. Under this stairway is also the door opening to the entrance to the basement space, and provided with a flap cover to the opening. This was utilized in the replacement of the cottage as a means of access to the new basement or caretaker's quarters. The space was so restricted that a proper flight of steps could not be made, and a steep ladder was the only means of descending to the basement, unless by going outside the cottage to the east end, where a flight of brick steps leads to the new basement kitchen.

The attic comprises three spaces, the easterly end being a bedroom occupying rather more than one-half of the total space, and provided with a door and two windows looking east. This room is provided with a modernized fireplace fitted with a grate for coal, and connected into part of the flue of the parlor fireplace below. The attic included also a small chamber lighted by a window looking west, and these two rooms open into a space

lighted only by one of the small windows under the eaves on the south side of the cottage.

The exterior of the building is provided with a porch extending along the original building on its south side, and including the door entering the kitchen. This porch was therefore probably built or increased in length at the time of construction of the kitchen. The building is covered with broad shingles on its exterior, and has a shingled roof. The windows are provided with outside swing shutters, some of which are doubtless of original construction.

The appearance of the building was greatly injured by a modern smoke-pipe placed on top of the new chimney of the basement kitchen to improve its draft. The setting of the building at so high a level necessitated the provision of a flight of steps at the east end of the porch where originally only two steps appear to have been necessary.

The house as located faces in the same southerly direction as when it occupied its original site, and has in front of it an area of lawn with several well-grown trees. The Department of Parks planted at the rear a number of young firs. Access to the cottage was provided by a little path from the Grand Concourse.

The interior of the house was painted, the walls and ceilings papered, the plaster having become much cracked in the removal.

In this state, entirely bare of any furnishings, and disfigured by modern radiators and gas-jets, the committee found the cottage upon taking over its charge. The first efforts of the committee were to make a complete study of the building and its exterior and interior circumstances, and to lay out a plan of action for its improvement, and for the interior equipment with some materials that should lend appropriate interest to the building.

Examination of the construction of the building led to the conclusion that it was not older than the period of 1810 to 1816. Its proportions and the simplicity of its construction made it evident that its purpose was occupation by the humblest class of farm laborer; therefore, any attempt at decoration or at furnishing with materials of expensive character would be unsuited, both to its original character and to the circumstances of the Poe family when resident there.

A sub-committee made a study of all available published references to the building and its contents during the occupancy of Poe between the year 1846–49, and derived therefrom a number of interesting references to its then condition and furnishings. It is fortunate that the recollections of Mrs. Gove and others are available for this purpose, but even such reminiscences cannot wholly be depended upon as they were recorded after some time had elapsed, and the impressions of a visit or visits to the little house had perhaps partly disappeared. Thus it is remarkable that no writer correctly described the number of rooms in the building. Mr. F. M. Hopkins, writing in 1896, states that it contained only three rooms, whereas there are five in all, and probably some of these had not been entered by visitors.

It is assumable that the invalid wife of the poet at various times during the brief period of her life in the cottage, occupied different rooms, as one description very clearly indicates her presence in the attic bedroom, while another describes her as lying upon a straw pallet in the parlor; and the third authority, supported by some local tradition, states that she finally passed away in the little bedroom on the ground floor. Also there is authority as well as probability for the statement that some of Poe's literary work was done at his writing desk or folding escritoire in the parlor, while after his wife's death his desire for seclusion led him to occupy one of the attic spaces, which probably would have been the small northwest bedroom which has the best light for such a purpose.

The interior furnishings during the occupany of the family of Poe were those which had been removed there from his prior home in the city, and which sufficed, notwithstanding their simple nature, to make "the cosey home which Virginia Poe made, notwithstanding her limited means and contracted quarters." Mrs. Gove says, "The cottage had an air of taste and gentility that must have been lent to it by the presence of its inmates, so neat, so poor, so unfurnished, and yet so charming a dwelling I never saw. The floor of the kitchen was white as wheaten flour; a table, a chair, and a little stove that it contained seemed to furnish it completely. The sitting-room floor was laid with check matting; four chairs, a light stand and a hanging book-shelf composed its

furniture. There were pretty presentation copies of books on the little shelves, and the Brownings had posts of honor on the stand."

With such slender materials it is evident that very little in the way of actual furniture used by the Poes could be expected to be found at this late date. The committee, therefore, decided that while no effort should be spared to secure any articles of furniture that actually belonged to Poe, either by gift, by loan, or by purchase, it would be desirable to place in the building such objects and furniture as were related to the period of its occupancy, and were reasonably similar to such simple furnishings as were possessed by the Poe family.

Following this policy, a very careful examination is to be made of any objects loaned or given to the cottage, so that the interior may reproduce in a general way the appearance of the little home occupied by the poet. The first object to which the attention of the committee was directed was the reconstruction of the lean-to on the east end of the building, and a plan was prepared by Mr. Charles W. Stoughton for its reconstruction which included its use as a means of access from the main floor of the building to the caretaker's basement, in substitution for the ladder to which reference has been made, and the use of which had caused one or two accidents to the caretakers. For this purpose an opening was cut in the east end of the building, corresponding with the door of the closet in the kitchen so that access could be obtained thereby to the lean-to, and thus to the steps leading into the basement. This work was carried out during the year 1917, under the charge of Mr. John Harden, Jr., a builder who is experienced in such matters of reconstruction of old buildings.

Old materials of the period were found in the lumber yards in the locality so closely corresponding with the construction of the cottage, that a door was found of exactly the same proportions and design, with hardware of the same character. Old lumber from dismantled local buildings was secured, and the entire lean-to was constructed out of this old material, thus presenting in a very successful manner the original construction. The result has been to add greatly to the convenience as well as the security of the building.

In connection with this work a new chimney was erected at the rear of the chimney which had been built for the new kitchen

range, and this was carried to a greater height, thus improving the draft by increasing the area of the flue as well as its height, and doing away with the unsightly smoke-pipe. This flue was constructed of old bricks taken from the ruins of the coach-house of the Macomb residence at Kingsbridge, of about the same period of construction as the cottage.

The committee also have provided glass doors to a closet space in the kitchen, and to the two closets in the parlor, which thus afford closed space for the exhibition of objects of interest. These improvements were made possible out of the funds which had so far been collected, and still leave many other improvements which should be carried out in the near future. These will include the substitution of carefully installed electrical lighting in place of the unsightly and dangerous gas. The plan of the committee is to effect the lighting by means of old brass candle-sticks fitted with imitation candles and electric lamps, as has been successfully installed in the Dyckman house. The electric service would also provide for the use of a fan in the summer time, which in the restricted space is very desirable for the reasonable comfort of the caretakers.

The modern radiators are very objectionable in appearance, and unnecessarily high in pattern. It is planned to remove these and replace them by lower patterns, covering them in summer time by a seat or closet which could be removed in winter time.

It will also be necessary to repair the parlor flue and outside chimney top, as they are in a very decayed condition.

The floors have been liberally painted, and as this is a modern addition, the paint should be taken off and the original boards made visible, being waxed, as has been successfully done in the Jumel Mansion.

A list of desired objects for furnishing was issued by the committee, and has been responded to by gifts and loans of a number of interesting objects, some of which are not as wholly suitable as could be desired, but until they can be replaced by others, are sufficient to render the interior more homelike, and to add to the interest of visitors. Thus the parlor is now furnished with the original rocking-chair with cane seat and back which was used by the poet, and was given by Mrs. Clemm after his death to a member of the Valentine family, who afterwards occupied the

cottage. This has been given to the cottage by Mr. Valentine, who also presented a Bible which belonged to the poet, and came into the possession of the Valentine family in the same manner.

It seems probably that other objects once belonging to Poe may find their way to the cottage as time proceeds, but many of them were doubtless of such humble character that they were scattered in the neighborhood and used or disposed of.

By a curious set of circumstances, the old wooden bedstead used by the Poes was discovered in an old barn and was rescued and brought to the cottage where it has been placed in the small ground-floor bedroom, and provided with a straw mattress and an old type of counterpane.

The writing desk used by Poe is in private possession in the south, and the present owner values it at a figure entirely beyond the possibility of its purchase.

A contemporary portrait of Poe, said to have been painted while he was in New York City, and which seems to be genuine and to have some artistic merit, has been purchased by the committee and hung in the parlor.

A thoughtful gift of an appropriate character was a stuffed raven, which will be placed on a cast of a bust of Pallas above the chamber door.

The love of Poe for domestic pets is recorded by a number of his admirers — "the family seem to have always had a bird or a cat or growing flowers." With this in mind, the Zoological Society presented two beautiful singing birds with two large old-fashioned cages for their use. Their songs and some growing plants in the little white-curtained windows add a touch of living nature to the interior of the interesting dwelling.

Other gifts by interested visitors and admirers of Poe have included copies of publications of his works, and the loan of a number of pieces of old china and glassware for the furnishing of the kitchen closets. These add to the natural, homelike appearance of the kitchen, and are found to excite the interest of visitors.

Pictures and photographs relating to Poe and his works and homes are hung on the walls; these, however, will be gradually reassembled and reframed in better harmony with the period of Poe's occupancy.

An interesting and perhaps important development is the number of books which have been given to the cottage, either of a biographical nature, or editions of Poe's works. These are now sufficiently increased to indicate that one of the features of the interior may well be a complete library of Poe's works and biographies. A card index of all Poe's works and of references to Poe has been started, and will be available for reference by interested visitors and students.

The cottage is open to the public from 10 o'clock a. m. to 5 o'clock p. m. daily, and on Sundays from noon to 5 p. m., and is visited by an increasing number of persons of all ages and from many distant places. The number of children visiting the cottage is of particular interest.

The exterior of the cottage has been improved in its surroundings by the replanning of the pathway and flower-beds in front of and around the cottage and also by the removal of Park Department tools, etc., to the interior of the lean-to. The committee is planning a further improvement in this matter by asking the Park Department to plant more trees to form a background for the cottage as seen from Poe Park, and to extend the flower-beds around the cottage, together with some regrading of the ground in front, with a view to the reduction of the height at which the cottage is placed above the grade.

The committee has also in view an interesting project, prepared by Mr. Charles W. Stoughton, for the creation of a suitable emplacement of the bronze bust of Poe now standing for better protection in the kitchen of the cottage. Mr. Stoughton's plan would provide a suitable monument facing the cottage at a little distance, and backed by a brick wall and seats of curved shape, the intervening space being laid in grass lawn with brick pathways, affording a very suitable place from which to view the little cottage. For this purpose special contributions are being invited by the committee.

The love of Edgar Poe for flowers and his interest in their growth around his cottage home are recorded by several of those who knew him well. Some of the most pleasing pictures of his life at that time are afforded by their recollection of scenes at the little cottage. An English writer who was there in the fall of 1847 describes the flower garden, " whose clumps of rare dahlias

and brilliant beds of fall flowers showed in the careful culture bestowed on them the fine floral taste of the inmate." He speaks of "the neighboring beds of mignonette and heliotrope and the pleasant shade on the turf under the old cherry tree near the door."

These facts indicate the propriety of suitable garden beds, with flowers and bushes, as a feature of the exterior of the cottage, and with the aid of the Park Department, and under the interested attention of Mr. Shaw, the flower beds around the cottage are being provided with the same kind of plants to which the poet was so devoted.

Although, as will be evident from the foregoing description, many things remain to be done to add to the convenience, the security, and the interest of the little cottage, the general effect of the improved surroundings, of the simple furnishing, and the collection of related objects, has been favorably reflected in the interest evoked in visitors and in their attention and sympathetic appreciation.

Here lived the soul enchanted
By melody of song;
Here dwelt the spirit haunted
By a demoniac throng;
Here sang the lips elated;
Here grief and death were sated;
Here loved and here unmated
Was he so frail, so strong.

Here wintry winds and cheerless
The dying firelight blew,
While he whose song was peerless
Dreamed the drear midnight through,
And from dull embers chilling
Crept shadows darkly filling
The silent place, and thrilling
His fancy as they grew.

Here through this lowly portal,
Made sacred by his name,
Unheralded immortal
The mortal went and came.
And fate that then denied him,
And envy that decried him,
And malice that belied him,
Have cenotaphed his fame.

## FIRST EDISON POWER STATION

### Dedication of Tablet Marking its Site

On Thursday, October 18, 1917, at 4 p. m., exercises were held at the Electrical Exposition in the Grand Central Palace, New York City, to dedicate a tablet which was subsequently placed on the building at No. 257 Pearl street to mark the site of the first central station power station in New York City. The station was established by Thomas Alvah Edison thirty-five years before. The Pearl street site now belongs to the Caroline W. Astor estate and is occupied by Messrs. Magnus, Mabee & Reynard, all of whom cordially cooperated with this Society in the erection of the tablet under the auspices of this Society and the New York Edison Company.

The Hon. Arthur Williams, President of the Electrical Exposition and General Commercial Manager of the New York Edison Co., presided at the dedicatory exercises. The order of proceedings was as follows:

Address: "The Beginnings of our First Electric Distributing System," by John W. Lieb, President of the National Electric Light Association.

Address: "Marking the Sites of Public Undertakings," by George F. Kunz, Ph. D., Sc. D., President of the American Scenic and Historic Preservation Society.

Address: "Our City's Public Services," by Hon. Marcus M. Marks, President of the Borough of Manhattan.

Verses: "The Defeated King," written by George B. Staff.

Presentation of Tablet, by Reginald Pelham Bolton, Chairman of the Sites and Inscriptions Committee of the American Scenic and Historic Preservation Society.

Unveiling of the Tablet, by Miss Elizabeth Handforth Kunz.

Address: "The Value of Historic Record," by Edward Hagaman Hall, L. H. D., Secretary of the American Scenic and Historic Preservation Society.

Extemporaneous Remarks, by several men prominently identified with electrical science.

The exercises were interspersed with music by Spica's Royal Venetian band.

Mr. P. C. Magnus, President of the firm of Magnus, Mabee & Reynard, lessees of the property at 257 Pearl street, was a guest

on the platform; and Mr. William M. Cruikshank, representing the owner, was invited but unable to be present.

The upper third of the tablet, which was made by the Gorham Co., is occupied with a relief representing the interior of the power station. Below it is the following inscription:

1882. 1917

In a building on this site an electric
plant supplying the first Edison
underground central station system
in this country and forming the origin
of New York's present electrical system
began operation on Sept. 4, 1882
according to plans conceived and
executed by
THOMAS ALVAH EDISON
To commemorate an epoch-making event
this tablet was erected by
The American Scenic and Historic Preservation Society
The New York Edison Company.

The building used by the station was a converted brick warehouse. It was equipped with six generators of 125 horse-power each. From that small beginning has grown The New York Edison Company of the present.

## REMOVAL OF HIGH BRIDGE THREATENED

### Public Remonstrance Evoked

In an editorial in its edition of November 13, 1916, the New York Times called upon this Society to intervene to prevent the threatened alteration or removal of High Bridge which spans the Harlem river in New York City opposite 174th street Manhattan. During the past year the efforts of those who would sacrifice this impressive and beautiful piece of Roman arch masonry, so suggestive of the Roman aqueducts, have grown more insistent. A history and detailed description of this bridge is given in another part of this Report in connection with the Catskill Aqueduct.

The argument against the continuance of High Bridge, as set forth at length in the New York Sun of Sunday, February 10, 1918, is in brief, as follows:

The Harlem river is now a part of the Ship Canal connecting the Hudson river at Spuyten Duyvil creek with the East river at

Bronx Kills. Operated in conjunction with Long Island sound to the eastward and the Hudson river and the State Barge Canal (amplified Erie Canal) to the northward and westward, it is a link in the commerce between the Atlantic ocean and the Great Lakes. High Bridge, it is claimed, is an impediment in the passage of the Harlem river. The bridge has fifteen semi-circular arches. Eight of them in mid-stream have a span of 80 feet each, the others 50 feet each. The barges designed for the new barge canal are to be 42 feet wide and 300 feet long. Two of them with a tug of 20 foot beam in the middle will require more than 100 feet. Or, if a tug works with one barge alongside itself and the other towing, 80 feet is considered scant room. It is also claimed that as the piers of the bridge are set at something of an angle with the axis of the stream, the current between them makes the passage of boats difficult if not dangerous. Therefore, the removal of the two piers in mid-stream or the removal of the whole bridge is advocated by the Bronx Board of Trade and others. The war in Europe is being used as an argument in this case, as it is used in so many other projects at the present time, to score a point. Mr. Rose says:

"In 1776 — November 10, to be precise — King George's Forty-second Highlanders embarked from the marshy ground on the Bronx side of the site to begin their attack in the battle of Fort Washington. They landed in a ravine about where 165th street is now, in what now is Highbridge Park. So, in the beginning, the site aided the enemies of this country. And now, it is argued, the bridge is doing the same thing in this war by standing in the way of the improvement of our sorely taxed transportation system. King George — a different one — is on our side now instead of against us. Instead of his troops using the Harlem river against us, we want to use it against the nation whence that earlier George came. Hence the slogan: 'Tear down Highbridge and help win the war.'"

This Society would have no objection to the removal of High Bridge if its removal were indispensable to victory in the war; but it does not believe that such unavoidable necessity has yet been demonstrated; and meanwhile it has such confidence in the resources of American engineers that it hopes that the situation may be remedied otherwise.

In a report made on the question dated July 9, 1915, presented to the Board of Estimate and Apportionment on July 21, 1915, by the Chief Engineer of the Board of Estimate and Apportionment and the designated borough consulting engineers after a personal inspection of the entire situation, they recommended that no steps be taken looking to the removal of one or more of the piers of the bridge until other obstructions in the waterway at this point shall have been removed, and until the conditions shall have been materially improved at both ends of the Harlem river.

Questions to be considered before the bridge is tampered with are presented by the fact that at the north end of the Harlem river the sharp curves around the point of land upon which the Johnson foundry is located, and at the south end of the shoals of Harlem Kills, are serious obstructions to navigation, and should first be removed by the Federal Government. It is believed that navigation through the piers would be improved if the coal dock for the High Bridge pumping-station were removed, and the channels between the various piers were dredged out to give additional capacity for tidal flow, thereby reducing its velocity. If this were done the space between the piers would be as wide as the locks of the Barge Canal and should afford no greater navigation difficulties. One of the alternate schemes proposed is to build a tidal lock for boats through the piers of the bridge, which, however, would be very expensive, due to the poor foundation in the river bed.

If the removal of one or more piers becomes necessary, several plans of procedure have been suggested. One is simply to remove one or two piers and tie the arches together with tie-rods. Another plan contemplates building two arches of 160 feet each in place of four of the 80-foot arches, the mid-stream ends of the two new arches to rest on a pier in the middle of the channel. And still another plan proposed a 218-foot arch.

## BUILDING ZONE PLAN

### An Epoch-marking Event

Among the many plans for the improvement of the City of New York developed during the administration of Mayor John Purroy Mitchel, which ended December 31, 1917, was that for dividing the city into zones for the purpose of regulating occupations in certain parts of the city, the heights of buildings, etc. The influence of the example of New York City in this respect was indicated at the meeting of the City Planning Institute held in New York during the last week of November, 1917. From the proceedings of the institute it appeared that zoning commissions to prepare zoning plans have been appointed in Philadelphia, St. Louis, Newark, and other cities. Members and representatives of these zoning and city planning commissions and committees to the number of about 100 attended the conference.

On December 29, 1917, the Committee on City Plan of New York, through its Secretary, Mr. Robert H. Whitten, submitted a report to the Board of Estimate covering the work it had accomplished during the four years of its existence and suggesting matters for the new administration to take up. The committee was organized to consider such city planning matters as might be referred to it and to work out comprehensive and harmonious schemes for the physical improvement and development of the city. The most important work which it did was in regard to building zones.

A Districting Commission to carry out this work was appointed in June, 1914, and up to the close of 1916 the building zone plan constituted the chief work of the committee's staff. Regarding the Commission's plan which was adopted by the Board of Estimate, the report says:

"It is one of the most complete and comprehensive plans for the control of city building ever adopted by an American city. It marks an important epoch in American city planning and city building. It is applied to more than five and a half millions of people and it directly affects property assessed at more than $8,000,000,000. The building zone plan has now been in operation almost a year and a half. It has more than justified the expectations of its proponents. It has proved in practical opera-

tion to be a common sense method of city building. The only wonder is that the old haphazard, wasteful methods were so long continued."

Since the adoption of the building zone plan 126 petitions have been received by the Board of Estimate for the amendment of the zone maps. Of these 126 proposed changes, 40 have been adopted by the board and 68 have either been denied, withdrawn or filed without action. Eighteen are still pending. The changes made have affected only about one eight-hundredth part of the total area included in the zone plan.

Following the induction of the administration of Mayor Hylan on January 1, 1918, the resignations of the members of the Board of Appeals of the zoning commission were asked and tendered. A statement of the two sides of what was called " the Zoning Board row " may be found in the New York Times of Sunday, March 10, 1918.

### Building Height on Fifth Avenue

One of the most prominent events during the year 1917 in connection with the zoning plan was the strong effort further to limit the height of buildings on the east side of Fifth avenue, between 60th and 99th streets, facing Central Park. At present, this part of Fifth avenue is what is called a " one-and-a-half-times street," which means that buildings may not exceed a height equal to 1½ times the width of the avenue. The width of Fifth avenue is 100 feet, and the Fifth Avenue Association asked the Board of Estimate to make that portion of the avenue a " one-time street," limiting the height of buildings to the width of the avenue, namely, 100 feet. At a largely attended hearing before the Board of Estimate on December 22, 1917, action in the subject was postponed.

An incident of the hearing, which served to lighten an otherwise somewhat earnest discussion and which will doubtless be quoted occasionally in the future, was the remark of Hon. Frank L. Dowling, then President of the Board of Aldermen and now President of the Borough of Manhattan, sitting as a member of the Board of Estimate and Apportionment. President Dowling was opposed to the change and thought that the case was so clear

that he declared he had made up his mind before the advocates had had an opportunity to speak. When Hon. Marcus M. Marks, the President of the Borough of Manhattan, asked him how he could do that after hearing only one side of the case, he replied: "Because it is a one-sided street."

The object of the petitioners in this matter was frankly to preserve the character of upper Fifth avenue as a place for private residences. It is about the only great thoroughfare left in Manhattan Borough now having that character, as great apartment houses and hotels have been erected on Riverside Drive and other leading streets and avenues. The old plan of excluding apartments from upper Fifth avenue by means of restrictive covenants in the deeds was considered unsatisfactory, and the exclusion of apartments as a class by ordinance was not considered so safe from a constitutional point of view as the indirect method of limiting the heights of buildings. It was argued that by limiting the height to 100 feet, or eight stories, apartments would be economically unprofitable. In Boston, a discrimination is made in favor of residential districts, in which the height of buildings is limited to between 80 and 100 feet, including buildings fronting on parks and squares.

It was also objected by the petitioners that tall apartment houses dwarfed the residences, interfered with their light and air, depreciated their value, and also cut off the view of the park from the houses to the eastward on Madison, Park and Lexington avenues. It was held that there was ample room to the eastward for the erection of apartment houses without putting them on the celebrated "show avenue" of New York.

## NEW YORK CITY PARKS

### Histories of the Parks

There is no book containing a general history of the parks of New York City. Even the reports of the Department of Parks do not give any connected account of the origin and development of the parks. It is therefore necessary to consult old archives, Common Council minutes, Supreme Court records, books of conveyances, ald maps, and many other sources of information to trace the history of any park.

From time to time this Society has published more or less extended histories of some of them and they may be consulted in our Annual Reports as follows:

*Battery Park:* 1903, pp. 105–125; 1908, pp. 86–90.
*City Hall Park:* 1904, pp. 55–64; 1910, pp. 383–424.
*Central Park:* 1911, pp. 379–490.
*Mount Morris Park:* 1915, pp. 194–202.
*Morningside Park:* 1916, pp. 537–598.
*Fort Tryon Park:* 1917, pp. 735–780.

The creation of new parks has been duly recorded in our current reports and many historical allusions to other parks will be found in former Reports.

### Changes in Park Commission

On November 13, 1917, Mayor Mitchel received a cablegram from Hon. Cabot Ward, Park Commissioner for the Boroughs of Manhattan and Richmond and President of the Park Commission, tendering his resignation. Commissioner Ward had been in France on a leave of absence as a member of a military commission to study air-craft defense methods and had recently been commissioned a Major in the Officers' Reserve Corps, and attached to the aviation branch of the service. This Society viewed Major Ward's retirement from the Park Department with much regret. While handicapped in his administration by inadequate funds, yet within the resources of his department it was generally conceded that he had made one of the best Park Commissioners that the City has ever had. He had the interests of the people closely at heart, was solicitous for the proper use of the parks, was a stout advocate of protecting the parks against improper encroachments, was open-minded to suggestions from his fellow-citizens, and exercised a cultivated taste in matters that required discriminating judgment. Mr. Robert F. Volentine was appointed his successor.

With the change in the mayoralty on January 1, 1918, came a complete change in the Park Commission when Hon. John F. Hylan, the new Mayor, appointed the following commissioners:

For Boroughs of Manhattan and Richmond, William F. Grell.
For Borough of Brooklyn, John N. Harman.
For Borough of Queens, Albert Benninger.
For Borough of the Bronx, Joseph G. Hennesey.

The new head of the Park Board, Mr. Grell, was born in Germany in 1852. In 1898 he was Tax Commissioner and was elected Sheriff in 1899, running on the Tammany ticket. He was at one time President of the Platt Deutsche Volksfest Verein and a member of the Eichenkranz, the Amt Achin Club, the Amt Hadler Club, and the New York Scheutzen Corps. He was also formerly President of the German Democracy.

Mr. Carl F. Pilat, the able Landscape Architect of the Parks, who was appointed to that position in 1912 during Mayor Gaynor's administration, resigned on April 11, 1918.

### Advertising Signs in Parks

On page 22 preceding we have adverted to the unprecedented use of the public parks and open spaces during the past year for advertising billboards bearing signs designed to promote enlistments in the army and navy, investments in Liberty bonds, the conservation of food, etc., etc. In view of the persistent campaign which this Society and other civic organizations have been conducting for the past twenty years for the restriction of billboard advertising, and particularly for the prevention of billboards in or near public parks, we have not viewed this intrusion of billboards into the parks, even for war purposes, with entire equanimity. We believe that even in great emergencies like the war, discrimination should be used as to the means employed to promote public ends. In a case like this, in which the use of the public parks was not necessary, because other resources of public space free and adequate were available — as, for instance, for banners across the streets — we feel that the erection of billboards in the public parks and the placing of placards on statues have been injudicious and likely to establish a precedent which will neutralize the work of two decades for civic beauty.

### Gun Emplacements in Parks

One practical use of the parks of New York City for war purposes to which there is no objection is the building of emplacements for anti-aircraft guns. Announcement was made March 27, 1918, that contracts for the construction of such works had been awarded by the War Department to the White Fireproof Construction Company of No. 286 Fifth Avenue.

Two emplacements, 10 feet square by 10 feet deep, it is said, will be constructed at each of the following locations: Mount Morris Park, Fifth Avenue and 120th Street; Tompkins Square Park, Avenue A and Seventh Street; Fort Greene Park, Myrtle Avenue, Brooklyn; Lincoln Terrace Park, Greenwood Cemetery, and Mount Olivet Cemetery, Brooklyn. The work is already well under way and is under the direction of Gen. Theodore Bingham, in charge of the defensive works of the eastern and southern entrances of New York Harbor.

Permission to construct the emplacements in the Manhattan parks was given by Commissioner Volentine on December 21, 1917, to Major Harkness, then connected with the Corps of Engineers of the Second District. The Brooklyn permits were issued later. The War Department agreed to repair any damage that might be done to park property.

It is understood that additional emplacements will be built as soon as those under construction are finished. It has not been announced when the guns will be available for the city's defense.

## WASHINGTON SQUARE

### Historical Sketch of the Park

The placing of statuary on the Washington arch in Washington square in 1917 called more than usual attention to this public park.

Washington square is bounded on the north by Waverley place, on the east by Wooster street, on the south by Fourth street, and on the west by McDougal street, and contains 8.115 acres of land. Lying directly across the southern end of Fifth avenue, it has added importance as the head of that famous thoroughfare.

In primitive days, the park area was crossed by a lovely stream called by the Indian name of Minetta Water or Minetta brook, and by the Dutch name of Bestaver's (variously spelled) kill or rivulet. The east branch of this stream rose east of 5th avenue between 20th and 21st streets and flowed in almost a direct line to what is now the southwest corner of Union square, and thence in a curving line to its junction with the west branch near the middle of the block bounded by 11th and 12th streets, 5th and 6th avenues. Thence it flowed to 5th avenue and 9th street; down

5th avenue to 8th street; thence to Waverley place just west of 5th avenue; thence southwesterly across Washington square to 4th and McDougal streets; thence in a generally southwestern direction to West Houston and Varick streets; thence across Hudson street just north of King street; and emptied into the North river at about Charlton and Greenwich streets.

When the Dutch first settled Manhattan island, there was an Indian village called Sappokanican near the Hudson river in the vicinity of West 12th street. Lying back of the village, somewhat to the southeastward, was a tobacco plantation, which on the Manatus map (1639) is called the tobacco plantation of Gov. Wouter Van Twiller. Northeast of Washington square there was a considerable hill called by the Dutch the Zandtberg and by the English Sand Hill. The Manatus map indicates an ancient trail running from the Bowery road past Van Twiller's tobacco plantation to what is believed to have been the site of Sappokanican.

In 1768, the Common Council ordered a road to be laid out over a part of this old trail. The Common Council proceedings show that on Thursday, February 11, 1768, Francis Marschalk, one of the city surveyors, reported to the Common Council "a plan of two Roads, which he had made by order of a Committee of this board Leading from the Bowery Lane to the Hill or Sand Bank toward Grinage* and the same being taken into Consideration by this board, they thereupon made Choice of the widest of the said two Roads, and ordered that the Clerk of this Board, Give notice to those persons who have Lands Contiguous thereto, to Shew Cause on Monday next (if any they have) at the Common Councill Chambers in the City Hall of this City, why the same should not be Recorded, and to Remain as a publick Road for ever."

On Tuesday, February 23, 1768, the Common Council adopted the following order:

"Whereas, Francis Marschalk one of the City Surveyors on Thursday, the Eleventh of this Instant February, Preferred a plan of two Roads Leading from the Bowery Lane to the hill or Sand Bank towards Grenage, for the approbation of this Board.

* This spelling of Greenwich gives an interesting indication of its pronunciation at that time.

They thereupon made Choice of the widest of the two, and ordered that the persons Claiming Lands Contiguous thereto, have notice to shew Cause on the monday following, at the Common Council Chamber why the same should not be Recovered, and to Remain a publick road forever. And whereas no Sufficient Cause hath since been shewn to this board to the Contrary this Board thereupon Ordered that the same be Accordingly Recorded a publick Road and to Continue as such untill an order of this board to the Contrary, a plan of which said Road is now filed with the Report of the Committee Endorsed thereon, and approved and Confirmed of by this board which said Road agreeable to the plan now filed Runs from the old House fronting the Bowery Lane, North 73 degrees & 30 minutes west, 6 Chains and 85 Links; thence north 64 degrees and 45 minutes west, 22 Chains and 30 Links to the Brook Called by the Indian name Minnetta water."

This road, known as the Sand Hill road and later as Art street, began at the Bowery at the present Astor Place and followed the line of the latter to the present Broadway. Astor Place is therefore part of the old Sand Hill road. Thence it ran across the area now covered with stores west of Broadway to Waverley place just west of 5th avenue. Waverley place, which constitutes the northern boundary of Washington Square is, for some distance east and west of 5th avenue coincident with the Sand Hill road. From the point just west of 5th avenue where it crossed Minetta brook, the road was subsequently continued, bending toward the northward and running along the line of the present Greenwich avenue to West 12th street, with an extension to the obelisk erected to the memory of Gen. Wolfe. (For details of the location and history of the Wolfe monument, see our Annual Report for 1914, pp. 121–126.) This portion of the road, from the brook to the obelisk, was early called Monument lane.

As will be seen later, the location of Washington square was determined partly by the location of the Sand Hill road; and as the location of the old trail (later the Sand Hill road and Monument lane) was determined partly by the location of Sappokanican, it is evident that the history of Washington square is connected with that of the primitive Indian village and of Greenwich village. In fact the Sand Hill road was frequently called the road to Sappokanican.

The portion of Washington square lying west of the line of the now obsolete Minetta water was part of one of the earliest boweries of the Dutch West India Co. called the Bossen Bouwerie,* which included Sappokanican (nearly on the site of Gansevoort market) and later Greenwich village. The same western portion of Washington square was a part of the estate of Sir Peter Warren. Sir Peter was of an ancient Irish family, and according to his monument in Westminster Abbey, was a "Knight of the Bath, Vice Admiral of the Red Squadron of the British fleet, and a Member of Parliament for the City and Liberty of Westminster." In 1744, as commander of a squadron of sixteen sail, he had captured twenty-four prizes which were sent to New York and sold. Here came Capt. Warren himself, who married Susannah Delancey, daughter of Stephen Delancey, and bought about 300 acres at Greenwich. This was enlarged by a gift from the city in recognition of his services at Louisburg.

At about the time when Sir Peter Warren owned the land west of Minetta brook, the part of Washington square east of the brook was part of the large farm of Elbert Herring.

The area of Washington square, skirted on the north by the Sand Hill road and Monument lane, and crossed by one of the most considerable streams of the island, must have been a familiar sight to many a wayfarer and fisherman, for there was good fishing in Minetta brook. It appears not to have been improved land, however, although the Ratzer map of 1766–1767 shows the property of A. Eliot, Esquire, at Sand Hill, north of the road and east of the brook, in a state of cultivation.

Like more than one of our public parks, Washington square owes its existence to the fact that it had been used as a cemetery;

* There is uncertainty as to the meaning of the name Bossen Bouwerie. It is sometimes interpreted to mean the Bowery of Woods. Hon. James P. Davenport says: "It has sometimes been called the Bass Bowery, the Bassen Bowery and the Baassen Bowery. The old road to Greenwich was called the road to Bassen Bowery in liber 30 of conveyances, page 228. The grantee is spoken of as 'of Saponikan, alias Baassen Bowery.' Later the land is referred to as 'within the aforesaid village,' and another parcel of land is described in the same instrument as 'at the Bassen Bowery.' . . . As one of the early owners of property in that neighborhood was Garrett Baase Johnson, I think that one of the very early owners of the farm was one Basse, and that the 'n' is the usual possessive sign, so that it is 'Basse's farm.'"

and its use for that purpose came about in this wise: In 1794, the triangular piece of ground at the junction of what were then the Bloomingdale road and the Albany Post road, now Madison square, was appropriated to the use of the almshouse for a burial ground; but in 1797, a portion of this property was granted by the corporation to the State for an arsenal, and it became necessary to find a new place for the Potter's Field. The city fathers cast their eyes about and found a favorable location in some land of William S. Smith on the south side of the Sand Hill road, on the site of the present Washington square, and on April 10, 1797, decided to buy it. The Common Council minutes of that date read as follows:

"A Piece of Ground containing about 90 Lots parcel of the Land of Willm S. Smith bounded on the Road leading from the Bowery Lane at the two Mile Stone to Greenwich having been purchased at public Auction & offered to this Board as a proper Place for a public Buryal Ground at the price of £1800, 10 PCt. of the purchase Money to be paid immediately — one fourth of the Residue to be paid on the delivery of the Deeds & the Residue in two Payments of Sixty & ninety Days on approved Notes.

"The Board determined to take the same And it was ordered that Mr. Mayor issue his Warrt on the Treasr to pay the said 10 pr Ct amounting to £180* And also the said one fourth of the Residue of the purchase Money amounting to £405 on the delivery of the Title Deed† And further that two Notes each for £607:10/ the one payable in sixty Days to the other in ninety Days be made by Mr. Mayor & the Treasurer to the Grantor on the delivery of the Deed."

But the proprietors of the ground in the vicinity objected to the location of the Potter's Field there and on April 24, 1797, presented a remonstrance to the Common Council offering to provide the city with another plot in its stead. The remonstrance was referred to Aldermen Robert Lenox and Jacob De la Montagnie, and Assistant Alderman Mangle Minthorn who, on May 15, reported as follows:

"That they have viewed a Piece of Ground which the Petitioners will purchase at their own Costs & convey the same to,

* A marginal note indicates that the warrant for £180 was issued to Ephraim Hart.

† A marginal note shows that the warrant for £405 was issued to Jacob Sebor.

the Corporation for a public Cemetry and find it well calculated for the purpose so far as that is removed a convenient Distance from the Greenwich and Albany Roads, that the Soil is sandy & covered with Brush which will hide the graves & yet not interfere with digging them: But the Committee are obliged to remark that to get to this Ground the Hearse, the great subject of Complaint must travel either of the Roads above mentioned. The Committee further Report that the Petitioners are willing to grant this Piece of Ground to the Corporation at such a Price as they think it amply worth and either take the other Lot at the Price it cost or let it remain with the Board.

"The present Ground if converted into the use contemplated by the Board will certainly, under present Impressions be of Injury to the Petitioners and they appear so sensible of this fact that they are disposed to make considerable Sacrifices to remove it. The Ground they offer is certainly an eligible Place in every Respect except the one above mentioned."

The question was then put to the Board whether it would depart from its former action, and the vote was a tie, there being 5 affirmative and 5 negative votes. The Mayor decided the question by voting in the negative.

The Potter's Field thus established was also used as a place of execution, the gallows having been here for some time. (Half Moon Papers in Historic New York, I, 283.)

In 1823, Washington square was laid out and somewhat improved and at that time, the Potter's Field, which had long been disused, was obliterated. There is a tradition that during the improvements of 1823, the lid of a child's coffin fell in and disclosed an abnormal posthumous growth of hair that had shrouded the little pauper in a mass of blonde curls. When the excavation was made for the foundation of the Washington arch in 1890, some broken tombstones were found, bearing testimony to the former use of the site.

The place remained in a rather crude condition for nearly half a century, during which period it was occasionally used as a Parade Ground. The growth of the city and the settlement of a fashionable population in the vicinity during that period made it desirable that it should be made more presentable; and this was one of the first undertakings of the newly created Board of Commissioners of the Department of Public Parks which entered upon

its duties May 3, 1870. During the ensuing year, plans were prepared by M. A. Kellogg, Engineer-in-Chief, and I. A. Pilat, Chief Landscape Gardener, and were first described in the report of the commissioners for the year ended May 1, 1871. The work of improvement actually began on October 6, 1870. The top-soil or muck was carefully removed and placed in piles, while the general surface was leveled with crude earth. When the grading was finished and the mould spread out again, there was enough mould to spare to cover the entire lawn area of Tompkins square. Roads and sidewalks were laid out and curbed, the roadways being surfaced with the "S. H. Ingersoll improved wood pavement," and the sidewalks with "Day's vulcanized concrete." A circular basin with a rubble-stone and concrete bottom paved with brick and a brick rim capped with mountain grawacke stone was made in the center of the square for a fountain. There was an old iron railing with granite base in the square, which was removed and used to enclose Reservoir square (Bryant park).

In 1870, $39,961 was spent on the park; in 1871, $181,026; and in 1872, $23,702. By that time, the park was in very attractive shape and a center of much public interest. On the Fourth of July, 1872, again in 1873, and on subsequent Independence days, there were great displays of fireworks in the park; and in 1873, musical entertainments were begun, being held on alternate Tuesdays during the summer.

In 1889, at the time of the celebration of the centennial of the inauguration of Washington as first President of the United States, a memorial arch designed by Stanford White was built of temporary material in Washington square and was greatly admired. It was afterwards reproduced in permanent form, the cornerstone being laid on Decoration Day in 1890. The last stone was laid on April 6, 1892. The arch was formally transferred to the city on May 4, 1895, the ceremony having been postponed from April 30. The arch is 70 feet high and cost $128,000. It bears the following inscription:

To Commemorate the One Hundredth Anniversary
of the Inauguration of George Washington
as First President of the United States

Erected by the People of the City of New York

"Let us Raise a Standard to Which the Wise
and the Honest can Repair. The Event
is in the Hand of God."— Washington

MDCCCLXXXIX

## TOMPKINS SQUARE

### Historical Sketch

Tompkins Square comprises 10½ acres lying between Seventh street, Tenth street, Avenue A and Avenue B. Originally it was part of a marsh called Stuyvesant Swamp which extended to the East river, into which latter the swamp drained by several intersecting streams. This marsh was a favorite resort for snipe hunters as late as the first quarter of the nineteenth century. (Haswell's "Reminiscences of an Octogenarian.")

The area of Tompkins Square was included within the bounds of what was called the Public Market or Grand Market Place which was laid out on the new city plan by the Commissioners appointed under the act of 1807 and which lay between Seventh street, Tenth street, First avenue and East river. An inlet or canal extended from the river as far as First avenue. The "Commissioners' Remarks" accompanying their map of 1811 contains a long paragraph about this Public Market, and explaining how the level of the ground could be raised with the earth excavated from the proposed canal.

By chapter 269 of the Laws of 1829, however, the Market Place was abolished, and the map or plan of the city was altered by laying out Avenues A, B and C and Seventh, Ninth and Tenth streets through the Market Place.

At some date between 1829 and 1848 not yet ascertained — possibly in 1835 as suggested by Miss Drake — Tompkins Square was established between Seventh and Tenth streets and Avenues A and B; for it appears on a map of 1848.

By chapter 593 of the Laws of 1866 the square was declared "a public parade ground for the use of the First Division of the State of New York at such times as commandants of regiments

in said division shall designate, by orders," and it was made "the duty of the Street Commissioner of the City of New York, before the first day of July, 1866, to remove all trees and other obstructions" from the square and to "level and grade the surface of said square in such manner as to render it available as such parade ground."

By chapter 853 of the Laws of 1868, the Legislature appropriated $60,000 for the purpose of paving the Tompkins Square parade ground with Fisk concrete or other suitable pavement. Under the administration of Tweed as Street Commissioner, about two-thirds of the area was covered with a worthless composition and the remainder left bare.

The new Department of Public Parks, which entered upon its duties May 3, 1870, began to improve Tompkins Square during the ensuing year. There was at that time an asphalt sidewalk bordering the park. Within this exterior border were the remains of Tweed's asphalt pavement. The new Commissioners laid out a grass plot 40 feet wide inside of the sidewalk, and within this a promenade-sidewalk 25 feet wide. In the marginal grassplot rows of deciduous trees were planted, interspersed with lamps and settees. The exterior curbstone was replaced with a new one, and a deciduous tree planted every 30 feet along the inside of the curb. All the dead and unhealthy trees within the square were removed. These improvements left the square, in the words of the Commissioners, "a beautiful frame, the picture to be placed within it. If the military abandon its use for other places, the picture can be inserted." The report of the Park Commissioners for the twenty months ended December 31; 1873, said that the Tweed pavement was scaling up and gradually disintegrating, adding: "The whole is now in disorder, and the ground is unfit for any desirable purpose."

The Park Commission at that time endeavored to improve the border of the square by planting trees, etc., but it was a long time before it was really improved.

## UNION SQUARE

### A Land Battleship for Recruiting

Not since the good ship of state Hamilton, which was drawn through the streets of New York in the celebration of the adoption of the constitution in 1787, rested in Bowling Green for two years, has there been such a naval display in a New York City park as that now presented by the battle-ship Recruit in Union Square. (See Plate 37.)

The Recruit was built by the Recruiting Committee of the Mayor's Committee on National Defence under a permit issued by the Park Department April 19, 1917, for six months and extended on December 27 for the period of the war.

The ship was constructed at the southern end of Union Square in the summer of 1917 and is a realistic imitation of a battle-ship on a reduced scale. The vessel, which has a length of 200 feet over all and a beam of 50 feet, is headed southward, as if about to steam down Broadway. She has two lattice-work fighting masts and between them a large smoke-stack. Forward are two turrets, one superimposed on the other, each furnished with two heavy guns. Aft is a single turret with two heavy guns. Protruding from the sides of the ship are six pieces of smaller calibre. The ship has a captain's bridge, signalling apparatus, binnacle and compass, and many other appurtenances of a real ship.

The interior is used as a recruiting station for the navy. The crew consists of 70 men from the regular navy who live aboard the ship and sleep in hammocks swung in regular sea fashion. There are quarters for officers, first class bathing and toilet facilities, a piano with automatic playing attachment, and various facilities for recreation. A regular band is attached to the ship and plays at stated intervals. A real torpedo of large size, a sectional model of a large calibre gun, and other objects of a similar nature afford instruction and add interest to the interior.

It is said that when the Secretary of the Navy, the Hon. Josephus Daniels, visited the Recruit in 1917, he said, humorously, that it was so realistic that he could "almost hear the water under her keel and feel the ship roll."

## BRYANT PARK

### War Gardens in the Parks

As this Report is about to be transmitted, preparations are being made for the establishment of a "war garden" in Bryant Park, New York City. Last year a portion of Union Square was given over to agriculture and arrangements were made by the Park Department for similar use of park lands. The Bryant Park war garden will be opened, according to announcement, on Saturday, April 13, 1918, with exercises which will include the raising of a war garden flag given by Mr. Charles Lathrop Pack, President of the National War Garden Commission.

## CENTRAL PARK

### Shakespeare Garden

The planting of an oak tree from Stratford-on-Avon in Central Park, New York City, on Saturday, May 12, 1917, not only was an interesting event in itself, but also attracted attention to one of the most interesting modern features of the park called the Shakespeare Garden.

The Shakespeare Garden lies upon a rocky knoll just west of the southwestern corner of the old Croton reservoir, opposite the block between 79th and 80th streets. It is not laid out formally, but is traversed by narrow winding paths which lead between flower-beds planted with flowers mentioned in Shakespeare's works. The garden was established as a memorial at the time of the Shakespeare Tercentenary. Here in spring blossom the violet, wind-flowers, blood-root, and hepatica; rock-dress, English daisies, spring beauties, shooting stars, candy-tuft, forget-me-nots, and moss pinks; and these are followed through summer and autumn by the whole range of the floral gamut. More than 5,000 persons visit those two acres on a fair Sunday. The late Joseph H. Choate, shortly before his death, referred in a letter to

"The wonderful Shakespeare Garden, which I hope you have seen. If not, you have missed a rare treat. As it is founded on the flowers mentioned by Shakespeare in his works; and as it contains, besides these, all the old English flowers of prose, ballad and verse, I am sure it must be of special interest to you."

### Planting of the Stratford Oak

At the planting of an oak from Stratford-on-Avon in the Shakespeare Garden at 4:30 o'clock on Saturday afternoon, May 12, 1917, Dr. George Frederick Kunz, Honorary President of the Shakespeare Garden Committee, said:

"When the grass was green in the spring as it is now — approximately more than 300 years ago — Shakespeare was born. And 301 years ago the remains of the Immortal Bard were interred where now threatens the tablet: 'Cursed be he who moves these bones.'

"It seems most fitting, therefore, that at this springtime, a tree, dedicated to his memory, that first put forth its roots near his own home, should here be planted — and that tree an Oak. Why, when we made our request of the Mayor of Stratford-upon-Avon through the courtesy of our Ambassador, the Honorable Walter Hines Page, did we specify 'an oak?' Because the oak is indicative of strength and endurance. When last I saw the oak at Fountainebleu that Pharamond, the Frankish Chief, is said to have planted in the 14th century, it was estimated that the life of that tree would still extend for a greater length than my own span, although more than 1400 years had already elapsed since it was planted. We all remember the history of an oak that grew in our own land — the Charter Oak at Hartford, Connecticut. When Sir Edmund Andros was appointed Governor of New England, the colonists were loth to surrender their charter and at the Council Chamber, during debate, the lights were extinguished, the document seized and placed in the Charter Oak, where it remained from 1687 to 1689. This great tree was believed to be 1000 years old.

"The oak has been a favorite theme with poets and writers. We are reminded of the oak that Moore referred to that Lord Byron planted at his ancestral home at Newstead. The Royal Oak at Boscobel is renowned because tradition says that it was grown from an acorn of that tree in which Charles I lay concealed from his enemies. In the memorable lines of Arnold on the death of Nelson, he says: 'Our ships were British oak, and hearts of oak our men.' And in the same strain Garrick said: 'Heart of oak are our ships, heart of oak are our men.' In the Merry Wives of Windsor, Shakespeare himself wrote of Herne's Oak at Windsor:

And 'Honi soit qui mal y pense' write
Like to the Garter's compass, in a ring;
The expression that it bears, green let it be,
More fertile fresh than all the field to see;
And 'Honi soit qui mal y pense' write
In emerald tufts, flowers purple, blue and white;
Like sapphire, pearl and rich embroidery
Buckled below fair Knighthood's bending knee.'

And Shakespeare's contemporary, Bacon, wrote in his Essay on Gardens: 'God Almighty first planted a garden. Indeed, it is the purest of human pleasures.'

"We hope that this little tree which grew near Shakespeare's home will take root and flourish. There are other oak trees in the city which are of particular interest to us as Americans. In this same park in 1861 King Edward VII, then Prince Edward, planted a young oak tree, which is still growing. At Grant's Tomb is an oak that was planted by Li Hung Chang, the Chinese statesman, on his visit to the tomb some years ago. It is also of interest to us to know that the base of the miniature Statue of Liberty which was presented to Marshal Joffre by the citizens of New York City on Thursday last was made from the oak of a beam that Delancey put in a building that ultimately became 'Fraunces Tavern' in which Washington made his Farewell Address to his generals.

"On the occasion of the Shakespeare Tercentenary, in the greatest metropolis of the world, with all its varied activities, men and women paused to do homage to one whose fame for three centuries has only grown the greater; and time, as it moves on, will only the more loudly proclaim the honor and glory of one of the world's greatest poets and dramatists. If his spirit could see the beauty of this Garden, which is probably more complete than any garden of his period, surely he who loved the flowers could not but be filled with joy.

"This, in many ways, is a woman's garden. It has been the result of woman's labor of love; and we are particularly indebted to our friend and helpful president, Mrs. Clarkson Cowl; our energetic and indefatigable vice-president and secretary, Mrs. George Glen Gould; and our inspiring botanical and entomological director, Dr. Edmund B. Southwick, who has been my esteemed friend for more than a quarter of a century, and who has put the love and enthusiasm of a life into this City park. Last, but not least, our thanks are due to the Honorable Cabot Ward, Commissioner of Parks, and to Mr. Carl Pilat, who have aided and advised in so many ways, and have helped us to insure the permanency of this Garden."

### Catskill Aqueduct Memorial

In our history of the Catskill Aqueduct Celebration in Appendix E of this Report, extended reference is made to the plan for the transformation of the old Croton reservoir into a sunken garden and play-ground.

### German Submarine in the Park

On Saturday, October 20, 1917, the work of transporting to Central Park a captured German submarine was begun for the purpose of promoting the Liberty loan. The submarine, called the U-C-5, was 110 feet long, 11 feet beam, and had a displacement of 200 tons. It was captured in the middle of July, 1916, by the British. It had no torpedo tubes and was equipped for mine-laying only. The submarine was separated into three parts for convenience of transportation, and was hauled from the North river at 132d street via Manhattan street, 125th street, 7th avenue, 110th street, and Central Park West to the 66th street entrance to the park and "docked" on the Sheep Meadow. The U-boat was sent to this country with the compliments of the British Admiralty. A great many difficulties had to be overcome before the prize was released, to be used for this purpose. A British "tank" came over at the same time and was exhibited in Central Park and the streets to arouse interest in the Liberty loan.

## CENTRAL PARK TRENCHES

### Advertising Exhibition for Liberty Loan

The statement so frequently made by those who in years past have defended Central Park against improper use that small concessions of principle lead to greater demands was never better illustrated than in 1917 and the opening months of 1918. The placing of placards on statues in public places, the erection of billboards in public parks, the exhibition of the British "tank" and captured submarine in Central Park, and the exhibition drills of troops in the same area, although quite foreign to the purposes of the park, were indulgently tolerated because they were for war purposes. And this inevitably led to the larger demand, in March, 1918, that some thirty acres of the North Meadow in Central Park

be given over for an exhibition of military trenches for the purpose of advertising the Liberty Loan.

The public first became aware of this new plan for this use of the park on Friday, March 15, 1918, when the Board of Estimate and Apportionment voted $25,000 for the restoration of the park after the trenches were dug. The application of the Liberty Loan Committee for the use of Central Park for its advertising trenches was contained in the following letter:

"Mayor John F. Hylan and Members of the Board of Estimate and Apportionment:

"Gentlemen — The Liberty Loan Committee, representing the United States Treasury Department in this district, desires to make a formal application to you for cooperation, which we believe gives an unprecedented opportunity to place the war before the people of New York city.

"In being charged with the responsibility of raising the great proportion of money needed by the Government, this committee has found it necessary to call upon the city for considerable cooperation in the past. We have felt, however, that up to this time we had not been able to present any unique feature which could be exhibited in a public place and without charge to all the people of the city. We are now able, however, through the courtesy of the French Government to set up and equip in a central place the most complete reproduction of a sector of the actual trenches in France now occupied by American troops, including a great number of citizens of New York.

"This material down to the minutest detail is now in this country or on the sea en route for New York. The whole plan has been worked out in the greatest detail with the cooperation of the French Commission and has the approval of the Treasury Department. The material and maintenance are being furnished to the Government without charge through the cooperation of the French Government. It only remains, therefore, to find a suitable place to dig the trenches.

"After two months of careful study of the entire situation with private and army engineers, we have come to the conclusion that from the point of view of the people of New York city as a whole the most satisfactory place to locate these trenches would be the so-called North Meadow in Central Park. This is a matter which falls under the primary jurisdiction of the Commissioner of Parks and the matter has been informally placed before him and has received the tentative approval both of the Mayor and the Park Commissioner.

"This Committee has felt, however, that the matter should be formally presented to you as Mayor of the city and to the Board of Estimate and Apportionment, inasmuch as this committee has no funds with which to make the necessary restoration of the park after the exhibition has served its purpose. In short, the help that is needed from the city is the donation to the Government of the privilege of using this territory and the assumption by the city of the cost of restoration. We do not feel like calling upon the business men and bankers of New York for any further contribution in connection with the Liberty Loan work, as they have already contributed to the extent of hundreds of thousands of dollars not only of their time but in actual cash for the use of this committee in advertising and in other ways.

"A Liberty Loan campaign is not primarily a financial campaign. It can only succeed through the cooperation of the whole people and the arousing of their morale and enthusiasm to the highest point. We feel it proper that in undertaking a campaign of this kind which has a distinct bearing upon the people of the whole city we should call upon you for that leadership which can only be supplied by the constitutional officials of the city. We believe you will appreciate the importance not only to our own citizens but to the entire country, which looks to New York for guidance and initiative of the establishment of these 'Liberty Trenches.' We would only add that inasmuch as the complete preparation of this work for public exhibition requires considerable time, prompt action would be greatly appreciated.

"Very respectfully yours,

"Pierre Jay, Vice-Chairman."

It was announced that the trench sector exhibit would include barbed wire entanglements, dugouts, communication trenches, a battery of 75s, telephone post, first aid post, field kitchen, wrecked airplanes, shell holes and one camouflaged big gun.

### The North Meadow

The North Meadow, upon which permission was asked to establish this trench system, is the largest playground in the northern part of the park. It comprises some 30 acres bounded on the south by the 97th street transverse road, on the east by the East Drive, on the west by the West Drive, and on the north by the cross road from McGown's Pass to the West Drive opposite 102d street. It was originally constructed at great expense when the park was

built. A wild and crude area was filled in and graded, top-soiled and sodded, and planted about with shrubs in the best landscape art of Olmsted & Vaux. The marginal shrubbery blends into the woods which lie beyond, and altogether it is one of the most inviting play-grounds in the whole city. It is frequented by many thousands of children and young folks, not only from the upper east side, but also from the better residential sections to the north and west of the upper half of Central Park.

In 1911–12, after two years of unrestricted use under the park administration at that time, the meadow was in such bad condition that it required making over. The young folks were therefore excluded, and a large expenditure of labor and money made for its restoration. The lawn was plowed up and re-seeded; and the next spring it was plowed and harrowed and a green manure crop plowed in. After being allowed to lie fallow for a season, it was plowed up once more and re-seeded permanently. It was necessary to keep it out of use, however, until the fall of 1916 in order that the sod might become tough enough to withstand use again. The foregoing details of the renovation of the meadow are mentioned to show the slow process of renewing a playground when it is worn out. The restored meadow has been in use about a year and a half since its renewal. We are informed by the Landscape Architect of the Parks that it will take four years to restore the meadow again after the Liberty Loan trenches are dug; and counting the time of occupation with the trenches, the throngs of children who have used the meadow for wholesome recreation would be deprived of it for four or five years.

### Objections to the Central Park Plan

The Board of Estimate and Apportionment on March 15, 1918, voted $25,000 for the restoration of such ground as might be used for the trenches, and referred the question of their location to the Committee on City Plan of that board, consisting of the Comptroller and the five Borough Presidents.

On Tuesday, March 19, the Committee on City Plan held a hearing. Mr. Guy Emerson, publicity agent for the Liberty Loan Committee, appeared in advocacy of the Central Park site. His argument at the hearing and his statements to the representative

of this Society afterwards indicated that he desired the use of Central Park, not because it was more accessible than other parks, or more adaptable to the proposed exhibition, but because of its "publicity value." His idea was that if it could be heralded throughout the country that the trench exhibition had been held in Central Park, it would popularize the Liberty Loan. When Battery Park, the Court House site, Manhattan Square, the Stadium and vacant land adjacent, and Van Cortlandt Park were suggested, he would not modify his request. As a matter of fact, which became known after the hearing, application had been made two months before for the use of Van Cortlandt Park and the Park Commissioner of the Bronx and Mayor Hylan had made no objection to that site. The questions asked of Mr. Emerson by members of the City Plan Committee indicated their reluctance to permit the use of Central Park for the proposed purpose; but as the publicity agent refused to accept any other site, the City Plan Committee was placed in the embarrassing position of either acceding to a request which had already stirred up a strong public sentiment of opposition, or of refusing to grant a request claimed to be essential to the success of the Liberty Loan.

Mr. Gutzon Borglum, the sculptor, and Mr. Heywood Broun, a Tribune correspondent, advocated the use of Central Park.

The Secretary of the American Scenic and Historic Preservation Society; Mrs. George Wilson Smith, representing the Washington Headquarters Association; Mrs. Clarence H. Young and Mrs. L. R. Schuyler spoke in opposition.

The arguments of this Society against the use of the park for the purpose proposed were briefly these:

There would be extensive material damage to the meadow, requiring, as estimated, $25,000 for its restoration, and to the surrounding shrubbery.

The many thousands of children and youths who customarily use the meadow would be deprived of it for four or five years.

The digging of imitation trenches and the giving of sham battles in Central Park would be a use foreign to the purpose of Central Park, which was designed for a quiet retreat from the hubbub of the city, for gentle recreation, and for freedom from noisy crowds.

The discharge of fireworks, with floating lights, etc., would endanger valuable property in the neighborhood and would be a reversal of the policy established after eight "safe and sane" Fourth of July celebrations of excluding the use of fireworks from the city.

The use of the park for advertising purposes, because of its "publicity value," would establish a precedent which, if followed in behalf of other worthy causes, would result in the utter perversion of the park from its proper and original function. Instead of being a park, it would become simply an advertising medium which countless other excellent movements would demand to use in years to come until its value as an advertising medium ceased. And it would lose such value, from the advertising standpoint, when shows and exhibitions become so common that the announcement that they were held in Central Park, New York City, indicated no particular distinction. It would appear that the present "publicity value" of using Central Park is largely estimated from its expected effect in the country at large. The announcement that after more than half a century of steady resistance to encroachments and perversions, and the rejection of scores of projects* for the misuse of the park, the Liberty Loan Committee had succeeded in breaking down one of New York's most cherished traditions and had been able to stage an advertising exhibit in the most beautiful and famous park in America, is apparently expected to startle the public into giving attention to the needs of the Government and buying the Liberty Bonds. The precedent would also serve as a lever for the admission of Liberty Loan exhibitions to Golden Gate Park, San Francisco, and any other public park between the two coasts.

The foregoing considerations, however, would have no weight with this Society if the use of Central Park for the proposed purpose were essential to the success of the Liberty Loan. It is the apparent needlessness of the use of this particular park that leads to our objection; for other sites, more accessible and equally or better adapted to the exhibition are available without objection.

* See list of proposed encroachments in our Annual Report for 1911 and references to other projects in later reports.

### Popular Agitation of the Subject

During the whole week of March 10, 1918, the newspapers abounded with news articles, editorials and communications on the subject. The New York Times led in the protest against the use of Central Park for the proposed purpose. The Herald, Evening Post, Evening Sun and other papers also opposed it, while the Tribune, World, Evening Mail, and some other papers took the other side. The Municipal Art Society, the Broadway Association, the Fifth Avenue Association and other civic and patriotic organizations adopted resolutions opposing the scheme, and many prominent citizens, such as Prof. Henry Fairfield Osborn, President of the American Museum of Natural History, Mr. Adolph Lewisohn, and others expressed similar sentiments.

It is only fair to say that there were honest divergencies of opinion on the subject, not with respect to the desirability of promoting the Liberty Loan in every necessary way nor as to the interesting nature of the trench exhibit itself, but with respect to the necessity and desirability of using Central Park for the purpose, and there were many prominent citizens who favored the project.

### Letter to the Liberty Loan Committee

On March 22, 1918, this Society addressed the following letter to the members of the Liberty Loan Committee:

Dear Sir:

May we very earnestly ask you and your colleagues of the Liberty Loan Committee to secure a reconsideration of the project to dig trenches in Central Park for advertising purposes?

We are all united and guided by the supreme purpose to do anything and everything that can be done to aid in winning the war and crushing the power of militaristic autocracy that now threatens civilization. Whatever sacrifices that entails must be made. If we believed that the proposed disposition of a part of Central Park would accomplish that purpose better than it could be accomplished otherwise, we would be swift to acquiesce in the making of that sacrifice. But it is because we are so fully persuaded that this proposal is calculated to do more harm than good to the great cause that we make this earnest appeal to you.

About two months ago application was made to Park Commissioner Hennessy of the Bronx for permission to dig the trenches

in Van Cortlandt Park, and we are informed by him that he and the Mayor did not view the request unfavorably. To that site there appears to be no objection. That park is more accessible than Central Park. The terrain is better adapted to the proposed exhibition; the material damage there will be less; no dangerous precedent will be set; and public sentiment will not be offended.

The North Meadow of Central Park, on the other hand, has recently been restored at great labor and expense, involving the exclusion of the children for about five years ending in the fall of 1916. Mr. Pilat, the Landscape Architect of the Parks, told us yesterday that if the trenches were dug there, it would require at least four years after the trenches were abandoned to restore the meadow so that the young folks could play on it again. Extensive damage to the surrounding shrubbery will also be inevitable. The fireworks will endanger valuable neighboring property. And last, but not least, such use of the park — not because of unavoidable necessity but, as Mr. Emerson frankly says, because of its " publicity value," — will establish a precedent which will lead to the utter perversion of Central Park from its proper and original function.

With most sincere and cordial sympathy with your great undertaking, and full appreciation of the load of responsibility which you carry, we beg you thoughtfully to consider whether the proposed use of Central Park is calculated best to promote the end you have in view.

Very respectfully yours,

George F. Kunz,
President.

E. H. Hall,
Secretary.

Henry W. Sackett.
Henry E. Gregory.

### Report of the City Plan Committee

On Friday morning, March 22, 1918, the City Plan Committee reported to the Board of Estimate and Apportionment a resolution recommending the construction of the trenches in Central Park. Mr. Albert S. Bard, President of the Municipal Art Society, and Mr. Edward Hagaman Hall, Secretary of the American Scenic and Historic Preservation Society, spoke in opposition to the adoption of the resolution. The only speakers in favor of it were members of the Board of Estimate and Apportionment, who

consumed much of the time of the hearing in explanation of their attitude on this and other public questions and in asking Mr. Bard and Mr. Hall questions calculated to place them at a disadvantage. Others were present in opposition to the resolution, but the hearing was closed by the Mayor with the advice to the "art artists" to take a vacation until the end of the war, and his direction to the clerk of the board to call the roll.

The resolution was unanimously adopted.

### Letter from the Liberty Loan Committee

A sub-committee of the Liberty Loan Committee held a meeting on the same day as that on which the foregoing meeting of the Board of Estimate and Apportionment was held, and sent to the Mayor the following letter which was received after the meeting. The passages in italics and capitals have been italicized and capitalized by us for two purposes: First, to show that it was the advertising value of Central Park which was desired; and second, that the Liberty Loan Committee declares *"the reasons advanced for not using the park to be unanswerable in any but a time of national crisis and emergency."* We trust that this declaration which we are very glad the Liberty Loan Committee has made will serve to prevent the digging of trenches in Central Park at this time from being used as a precedent in time of peace for advertising exhibitions. Their letter is as follows:

To His Honor the Mayor, and the Board of Estimate and Apportionment, New York, N. Y.:

Dear Sirs:

You have been good enough to approve the plans of the Liberty Loan Committee to place in a city park during the next Liberty Loan campaign an accurate reproduction of a sector of the fighting trenches in France, and have appropriated a sum of money for the complete restoration of the site after its temporary use for this purpose.

The Liberty Loan Committee made this request of the City because it feels the necessity, in order to sell immense amounts of war bonds during a four weeks' period, of conducting the campaigns very largely on a war basis, not merely on the usual financial basis. These bonds are war bonds; they are being issued because American soldiers are at the front and because we have

an increasing financial responsibility to our allies as the war goes on.

Carrying out this idea, during the second Liberty Loan campaign, a captured German submarine, symbolizing the ruthless warfare that was the direct cause of America's entrance into the war, was transported to this country through the courtesy of the British Government, and was set up in Central Park. It was accompanied by a British tank. These two engines of modern warfare attracted great crowds to Central Park, and were one of the principal means of producing the atmosphere not only in New York City, but also through the entire country, which resulted in the tremendous subscriptions to the Second Liberty Loan.

Many months have been consumed in developing plans for the third loan drive, including the location of trenches in Central Park. During this time many sites and parks have been examined, and the various experts who have undertaken the investigation have agreed that a far greater contribution can be made to the sale of Liberty bonds both in this city and throughout the country by the location of the trenches in this internationally known park than by placing them anywhere else in Greater New York.

Furthermore, the time for raising our great proportionate share of successive loans is very short. *It would seem that the most widely known location, which Central Park is admitted to be* is the location which should be chosen without too great hesitation in such an emergency.

Since you have had the proposed plan under advisement, some opposition has developed to putting the trenches in Central Park. No opposition, however, has been made as to the fundamental value of the trench exhibit as such. There is almost universal agreement that for the success of the bond campaign we must do everything we can to bring before those who remain at home the conditions under which our soldiers are fighting in France, and that the proposed exhibition would visualize the war better than anything else that could now be undertaken.

The objection to the use of Central Park seems to be based, first, upon damage that might be done to the park and, second, upon the fear that this intrusion might serve as a precedent for private encroachments upon the park after the war is over. The plans of the committee contemplate complete protection of all trees and shrubs in the vicinity of the exhibit and the complete restoration of the soil and sod, for which the city has appropriated a substantial sum of money.

With regard to the creation of a precedent, those who object to the use of Central Park are quite willing that the trenches should be located in some other park, indicating that there is no objection to the use of parks as such for war purposes. Central Park was selected by the committee *as one of the greatest publicity centres of the world,* like Hyde Park in London and the Bois de Boulogne in Paris. The committee felt that the temporary use of a small part of Central Park for a purpose so intimately connected with winning the war would serve as no precedent for private encroachments after the war is over and that the protection of the park in times of peace could well be left to the officials and citizens of New York. The members of this committee would be among the first to resist the use of any park in times of peace for private purposes.

The Liberty Loan Committee, acting in a representative capacity for the United States Government in the Second Federal Reserve District, is charged with the duty of selling bonds throughout the entire district.

Its plans during the last two loans, as well as its plans for the coming loan, have been developed after mature deliberation, and the unanimous and patriotic public support which these plans have thus far received makes the committee feel the necessity of retaining the full and active support of the entire public during the campaign we are about to enter upon.

The whole committee, therefore, has felt it advisable to give this matter renewed consideration. We have carefully reviewed all the arguments presented. We naturally sympathize with such feeling as exists against the use of this park. We do not for a moment doubt the patriotic feeling of those who oppose this plan. *We regard the reasons advanced for not using the park to be unanswerable in any but a time of national crisis and emergency.* But that such an emergency now exists we do not believe there is any widespread doubt after a year of our active participation in the greatest war in history, after the diversion of our industrial and financial machinery to purposes of war, and in view of daily casualty lists evidencing the heroic sacrifices of our soldiers and sailors.

We are able to say to your honorary committee, therefore, without reservation, that we believe that in view of present circumstances the plan proposed is in the best interests of the government and of the people of the city.

The digging of the Liberty trenches will not desecrate, but rather consecrate this ground — consecrate it to the devotion we all bear to our sons who are today fighting in the trenches of France, and to the sacrifice we are prepared to make of all we have and all we are.

We should like to take this occasion to thank you for your ready cooperation in this as well as in the many other matters which have been presented to you by this committee.

### Final Action by this Society

At the monthly meeting of the Board of Trustees of the American Scenic and Historic Preservation Society held in the building of the Bar Association of New York on Monday evening, March 25, 1918, the following minute was unanimously adopted:

"With respect to the digging of trenches in Central Park for the purpose of advertising the third Liberty Loan, the American Scenic and Historic Preservation Society accepts a situation which it has been unable to prevent in the public interest.

"The Society notes with gratification and desires to emphasize the declaration of the Liberty Loan Committee that the arguments presented in opposition to the trenches in Central Park are unanswerable except in this emergency of war and that this use of the park is not to be regarded as a precedent in other circumstances.

"The Society, while regretting this use of Central Park for advertising purposes, reiterates its heartiest sympathy with the object sought to be attained, namely, the popularizing of the Liberty Loan, and having subscribed to both of the preceding loans, hereby promises to subscribe according to its means to the third Liberty Loan."

### Ex-Park Commissioner Ward Opposed to the Trenches

The opinion of Major Cabot Ward, who was Commissioner of Parks for the Boroughs of Manhattan and Richmond for nearly four years ending in November, 1917, has peculiar value, coming as it does from a man who at the same time is familiar with Central Park and embodies the spirit of the American army in France. In a cable dispatch to the New York Times from Paris dated March 24, 1918, Major Ward is quoted as follows:

"There's no doubt it would be a shocking mistake to place the proposed exhibition of war trenches in Central Park. It has been thoroughly realized in France that the war increases the need of normal healthy recreation places which must not only not be interfered with, but rigidly preserved for the masses in our crowded American cities. This particularly applies to Central Park, the most valuable single possession of New York, whose every acre is intensively used every day, so that no part of it can be withdrawn

without destroying that symmetry of plan which makes it a marvel of varied recreational activities for all classes of citizens.

"As Park Commissioner, I always knew that the New York Times would be prompt to discover and resist every project to interfere with the operation of this great city asset or any attempt to create a vicious precedent that might lead to future misuse.

"I am glad the New York Times maintains its record as a protector of the park, even against so worthy and useful an object. They should find another place for this exhibition, just as they did for the encampment of troops proposed for Central Park during my administration.

"What I have learned in Europe about park management confirms the view held by the New York Times and which I tried to apply, viz.: Rigorous adherence to proper park uses is absolutely necessary to prevent encroachment which would ultimately lead to perversion of the very purposes for which they were created."

### Trench Project Finally Abandoned

During the next ten days after the action of the Board of Estimate and Apportionment, which seemed conclusive, hope was not abandoned that the Liberty Loan Committee would of its own accord abandon the project for the trenches in Central Park, and the public agitation of the question continued. The New York Times, particularly, continued to publish columns on the subject, and its files from March 19 to April 2, 1918, may profitably be consulted for many editorials, news articles, and letters from correspondents which it is impracticable to summarize in these pages. Some of the letters published in the week of March 24–30, were particularly forceful, written as they were by persons who had witnessed the care with which the Germans in Berlin, the French in Paris, and the English in London had preserved their parks, even in war times. Meanwhile, the trenches had been staked out on the North Meadow in Central Park; after which, in consultation with the Landscape Architect of the Parks, it was thought that the Sheep Meadow in the southwestern part of the park might be better. But even there, difficulties presented by sub-soil conditions and the underground drainage system of the park were discovered; and then it was announced that part of the materials which were to come from France for the trench exhibition had not yet arrived. With these developments, the

opponents of the park trenches were encouraged to hope that circumstances were conspiring to save the park after all from the threatened mutilation. And that eventually proved to be the case. At a meeting held on April 1, 1918, the Liberty Loan Committee considered the subject again, and at the close of the meeting, the Hon. Benjamin Strong, Chairman, gave out the following statement:

"At the meeting of the Liberty Loan Committee held to-day no change of views developed with regard to the desirability and importance, to visualize war conditions, of giving an accurate representation of trench life and activity in Central Park during the coming loan campaign, as expressed in the committee's letter of March 22 to the Mayor and Board of Estimate. The committee was informed, however, of the order issued March 26 by the Adjutant-General of the army limiting to twenty-four hours any absences which commanding officers may grant to their troops for participation in Liberty Loan demonstrations.

"In spite of the most vigorous efforts on the part of the committee the military authorities, possibly influenced by the seriousness of the great drive now in progress in France, feel unable to modify the order to meet this special condition, and it is therefore impossible for the committee to realize its expectation of placing at the disposal of the French High Commission a body of trained soldiers to construct the trenches and man them during the period of the loan campaign.

"The fundamental purpose of the exhibit was to present a vivid and realistic idea of the trench life and activity of our soldiers in France, and the committee feels that a mere exhibit of trenches and guns without trained soldiers to man them would be utterly inadequate to convey the living and lasting impressions which the plan was conceived to create and would justify neither the use of Central Park for the purpose nor the necessary expenditure of money, and the committee has advised the Mayor accordingly.

"In view of its responsibility for the organization of successive campaigns to raise money for the Government for war purposes and of the widespread public interest in the trench exhibit, the committee greatly regrets its inability to carry out this plan, which was to have been the central feature of its publicity work during the coming campaign. Past experience has proved that a realization of the seriousness of the war and the sacrifices it demands form the only basis on which these campaigns can be conducted successfully.

"The third Liberty Loan will be made an overwhelming success by reason of a far broader participation in it and a far better organization for it than ever before. The committee will, through the medium of indoor exhibits of the unique war material loaned by the French High Commission and the British authorities, and by means of parades and other features in addition to the usual posters and literature, conduct an intensive campaign along patriotic lines.

"But there should be no overconfidence. A task of the greatest difficulty is set for the country, because the contemporaneous payment of the loan subscriptions and of the taxes due June 15 will call for a transfer to the Government of a sum probably greatly in excess of the minimum estimate of $5,500,000,000. These together will constitute the most gigantic financial transaction in history."

### Central Park Policy in the Civil War

The purpose and theory of Central Park are well exemplified in the following extract from the Eighth Annual Report of the Board of Commissioners of Central Park, for the year ended December 31, 1864. The report was signed by Henry G. Stebbins, President of the Board, and Andrew H. Green, Comptroller of the Park and later the founder of this Society:

On the 28th day of April a portion of one of the regiments of the First Division of the National Guard, in contravention of the ordinances of the Board, and in oppisition to the remonstrances of the keepers at the entrance and on the way, entered the Park and moved by the carriage-way to the Green, and there, with men and horses, proceeded to parade and drill upon the lawn.

This act afforded an example for another regiment to undertake a parade at the same locality. The exigencies of the Park generally requiring but a small force of keepers, no provision is made to repel the unexpected advance of a considerable body of armed men. Remonstrance with the officers of the regiment was all the opposition that could be effectually presented at the time.

These proceedings on the part of these regiments did not meet the approbation of many of the most efficient officers and men of the First Division of the National Guard, who, while they felt that provision should be made of a parade ground in the City, so that their commands should be relieved of the expense and inconvenience of leaving the city for their annual regimental drills and parades, yet were unwilling to take any but proper measures to supply that necessity.

Deeming their organization especially provided for the preservation and maintenance of order, they were averse from being identified with, or responsible for any acts of disorder, whether resulting from misapprehension or design.

The attention of Brigadier-General Josiah T. Miller, Inspector-General of the State, having been called to the necessity of grounds for the accommodation of parades of the military of the city, and of other portions of the State, he uses in his report this language:

"Parade grounds are also essential, and the State should provide one for each division, and particularly for the First Division. This parade ground in the First Division ought not to be in Central Park. Military occupancy and exercises are inconsistent with the rules adopted for the government of the Park, as well as with the objects for which the Park itself was originally designed. Grounds equally convenient for military purposes might be obtained in the immediate vicinity of the Park, the occupancy of which by the military would accommodate officers and privates, and at the same time increase the enjoyment of the general public, always fond of military spectacles."

The subject was soon brought before your Honorable Body,* and on the coming in of the report of a Joint Committee of the Board of Aldermen and Board of Councilmen, who had given the subject full examination, the following resolution was adopted:

"*Resolved,* That that part of the square known as Hamilton square, lying between the Third and Fourth avenues, and Sixty-sixth and Sixty-ninth streets, be, and is hereby set apart and appropriated for the use of the First Division New York State National Guard, as a parade ground."

The Common Council having thus made provision for the admitted requirements of the military of the city, all that remains is to have the grounds put in order for their early accommodation.

The Commissioners of the Park take this occasion to express their appreciation of the considerate manner with which the officers and members of the National Guard generally met this whole subject, and the prompt disapprobation expressed by them of a course of action on the part of officers of two regiments of the city calculated to weaken the respect for order, and to initiate practices tending to materially interfere with the public enjoyment of the Park.

As a result of the foregoing experience, the Legislature, the following year, enacted chapter 26 of the laws of 1865, forbidding military parades in the park.

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* The Common Council.

### A Tax-payer's Suit in 1905

During the discussion of the Central Park trench scheme in March, 1918, the suggestion was made that some citizen bring a tax-payer's suit to restrain the use of Central Park for the proposed purpose. In that connection, it is interesting to recall the result of the case of Tomkins vs. Pallas* et al. (Sup. Ct. 95 N. Y. Supp., p. 875, Special Term N. Y. Co., May, 1905) which was a tax-payer's action to restrain the use for advertising purposes of a fence surrounding a portion of Bryant Park. In this case the Court said:

"It is to be noted that the two predominant ideas of the ends to be attained by the park commissioner are that the parks are to be so administered that their ornamental features are preserved and improved, and that they shall be fitted for the beneficial uses of the people. Any attempted use of the parks or park property which does not make for one of these ends is without the power given to the park commissioner, and therefore illegal. . . . A public park has been defined by the Court of Appeals as a piece of ground inclosed for purposes of pleasure, exercise, amusement, or ornament," (Perrin v. N. Y. C. R. R. Co., 36 N. Y. 120) and Commissioners charged with the care of such parks have often been held justified in granting licenses for the maintenance within parks of such conveniences as would enhance the opportunities of the public to use and enjoy the parks as places of resort, amusement, recreation and exercise. In every case, however, in which the exercises of this power has been sustained, it has been because the use authorized has in some way contributed to the use and enjoyment of the park by the public.

"The statute authorizes an action by a taxpayer (1) to prevent any illegal official act, or (2) to prevent waste or injury to the public property or funds. Laws 1892, p. 620, Ch. 301." (Cases cited.)

Injunction restraining the defendants was granted.

* Hon. Calvin Tomkins, now a Trustee of this Society, against Hon. John J. Pallas, who was Park Commissioner in 1904–1905.

## CENTRAL PARK WEST

### Car-track Problem Unsolved

The problem presented by the dangerous situation of the two street-car tracks on the eastern side of Central Park West between 59th and 110th streets, New York City, to which we have referred in former Reports, remains unsolved, but the condition of affairs has been improved by limiting the vehicular traffic of the avenue to one direction.

The Legislature of 1917 having enacted the bill which became chapter 692 of the laws of 1917, Mayor Mitchel filed with the Public Service Commission a complaint verified August 20, 1917, praying for a determination that the operation of the railroad on Central Park West by the New York Railways Co. and the Eighth Avenue Railroad Co. was dangerous and a menace to persons using Central Park West as a highway.

On December 3, 1917, after several public hearings, the Public Service Commission, consisting of Messrs. Oscar S. Straus, Travis H. Whitney and Charles S. Hervey, dismissed the complaint as stated in the following order:

"A complaint by the Mayor of the City of New York, verified August 20, 1917, having been filed herein under the Greater New York Charter, Section 242–c, as added by Chapter 692 of the laws of 1917, praying for a determination that the operation of the street surface railroad located on Central Park West in the City of New York constitutes a menace to life or to the safety of persons or property; and a hearing having been held upon said complaint on September 27 and October 3, 11, 24 and 25, 1917, pursuant to a resolution adopted by the Commission on September 10, 1917, and upon motion served upon the City of New York, the New York Railways Company and the Eighth Avenue Railroad Company; Lamar Hardy, by Samuel J. Rosensohn and Vincent Victory, appearing for the City of New York, James L. Quackenbush, by Arthur G. Peacock and Henry J. Smith, appearing for the New York Railways Company, Thomas F. Brennan, appearing for the Brennan Estate, Edward Hagaman Hall, appearing for the American Scenic and Historic Preservation Society, Samuel Parsons and Joseph Schloss, appearing in person, Louis Steckler, appearing for the Central Park Civic League, Fred. Hulberg, appearing for the Harlem Board of Commerce, and William L. Ransom, Counsel, Oliver C. Semple and Godfrey Goldmark, Assistant Counsel, attending for the Commission; and

after consideration, the Commission being of opinion that it had no jurisdiction to make the determination prayed for by reason of the non-compliance with and non-conformance to the provisions of Chapter 692 of the Laws of 1917, but in no way passing adversely upon any of the issues raised by the statute and the proofs herein.

"It is ordered that the above-entitled proceeding be and the same hereby is dismissed, without prejudice to any action or proceeding by the City of New York, or the Board of Estimate and Apportionment thereof, or to the institution of any new proceeding before this Commission, under the Greater New York Charter, Section 242–c, as added by Chapter 692 of the Laws of 1917."

The reason for the dismissal of the complaint was that the complaint was "jurisdictionally defective for non-compliance with and non-conformance to the provisions of chapter 692 of the laws of 1917." The Board of Estimate should have certified that the *operation* of the railroad was dangerous, instead of which it simply certified that it was a menace. The Public Service Commission quite sympathized with the end sought to be attained, and in the opinion accompanying the order above quoted said:

"The evidence adduced before the Commission clearly showed the dangers resultant from the present operation and would fully warrant the finding and determination called for by the statute. The Commission is strongly of the opinion that the present dangers resulting from grade operation along Central Park West should be eliminated at the earliest possible time, and hopes for a solution through a track removal which will make Central Park West available as a great, safe north-and-south thoroughfare, comparable with Fifth avenue on the opposite side of Central Park."

At the time of the hearings the idea gained currency that the Public Service Commission was to determine whether a strip of Central Park itself should be taken to remedy the situation, and the following advertisement was put in the newspapers to correct that impression:

**To Correct**
**An Erroneous Impression**
**Regarding**
**The Central Park West Bill**

There is no intention of removing the present park wall. Central Park will not be interfered with in any manner whatever.

But Central Park West must be made safe for citizens.
The Park or its wall will not be disturbed, only the sidewalk outside of the park is to be narrowed.

Edward M. Salomon,
174 William St.

As a matter of fact, the contingency of taking a part of Central Park for the purpose had been guarded against at the solicitation of this Society by the amendment of Senator Ottinger's bill before it became chapter 692 of the laws of 1917.

## KUYTER PARK

### Name Adopted

Under date of March 14, 1912, Hon. Charles B. Stover, then Commissioner of Parks for the Boroughs of Manhattan and Richmond, invited recommendations from this Society for the naming of a new park at Third avenue and 129th street, in the Borough of Manhattan ,and Commissioner Stover approved of the name Kuyter Park, after Jochem Pietersen Kuyter, a pioneer settler of Harlem. (For biographical sketch of Kuyter, see our Annual Report for 1913, pp. 176–178.) The adoption of the name by the Board of Aldermen, however, was prevented at that time by certain personal antagonisms.

In 1917, the Harlem Board of Commerce renewed the effort to have the name adopted by the Board of Aldermen, and at a hearing before the Committee on Parks of the Board of Aldermen, April 23, 1917, Park Commissioner Cabot Ward advocated the name, and resolutions in its favor by the New York Historical Society and the Harlem Board of Commerce were presented. The American Scenic and Historic Preservation Society and other civic bodies were represented at the hearing to support the request for the name. The Board of Aldermen finally adopted the name, and the resolution was approved by the Mayor April 30, 1917.

## LENOX MUNICIPAL PLAYGROUND

### Name Recommended

In June, 1917, Park Commissioner Cabot Ward asked this Society to recommend a suitable name for the municipal playground for which an appropriation had recently been made and which is to occupy the vacant city property between East 67th and East 68th streets abutting on First avenue, New York City. The site is opposite the New York Trades School and close to Public School 183 on East 67th street. It is one block west of the Rockefeller Institute. Across 68th street is the German Reformed Church, removed from its original site on Nassau street, in which is the memorial to Baron Steuben, once a member of the church and aide to General George Washington. The old Boston Post road crossed the present Third avenue at East 67th street, and about a block to the south, near 66th street, stood the Dove tavern at the time of the Revolution. The Lenox farm was in the vicinity and its owner, James Lenox, established the Lenox Library on the farm. Mr. Lenox was a citizen of great civic spirit and a philanthropist who was interested in the welfare of children and in the cause of education. His farm, inherited from his father, included a large area in the vicinity of the site of the playground.

From the foregoing considerations, the Society recommended that the park be named the Lenox Municipal Playground. Under date of June 30, 1917, Commissioner Ward expressed his approval of the name.

## ISHAM PARK

### Enlarged by Additional Gift

On September 23, 1917, the Commissioner of Parks for the Boroughs of Manhattan and Richmond, New York City, announced the offer of Mrs. Julia Isham Taylor to enlarge the park already given by her to the city by adding a plot containing about 22 city lots having an assessed valuation of $90,000. (For a record of previous gifts and the creation of Isham Park, see our Annual Reports for 1912, pp. 133–134; 1913, pp. 106–108; and 1916, p. 168.) On December 6, 1917, the Board of Estimate and Apportionment accepted the additional gift.

Isham Park is bounded by 214th street on the northeast, Broadway on the southeast, Isham street on the southwest, and Seaman avenue on the northwest; with an extension between 213th and 214th streets to Spuyten Duyvil creek (Ship Canal). The addition of 1917 lies in the western corner of the larger area, fronting about 200 feet on Isham street and 400 feet on Seaman avenue.

This is the fifth large plot that Mrs. Taylor (who is a daughter of William B. Isham, the original owner of the property) and the heirs of the Isham estate have given to the City of New York free and clear for park purposes, the only condition of the gift being that it be named Isham Park. The property is thickly wooded and will eventually become one of the city's most beautiful parks, owing to its situation and the possibilities offered for landscape work. The portions of the park previously given to the city have an assessed valuation of $391,500, making a total of $481,500 with the new gift.

The old Isham mansion, which was included in one of the previous gifts, is situated on a hill just west of Broadway near Park Terrace East. From its windows a beautiful view of the surrounding territory and the ship canal is obtained. There is a Subway station at 215th Street east of Broadway, only two short blocks from the park, which bids fair to be one of the most popular in the city's park system.

## FORT TRYON PARK

### Use for a War Hospital Proposed

In our last Annual Report we gave an extended history of Fort Tryon, and the generous offer of the property by Mr. John D. Rockefeller, Jr., to deed the property to the Palisades Interstate Park Commission for a park. The tender of 50 acres for this purpose was made on three conditions, namely, (1), that the city would appropriate $20,000 for its maintenance and development; (2) that the city would support legislation permitting a State appropriation of $100,000 to be used in the development of the property; and (3) that the city should connect the Fort Tryon tract with Fort Washington park by purchasing a small amount of land intervening between them.

Up to the present writing, the conveyance of the gift has not been consummated.

On November 24, 1917, the announcement was made in the public prints that negotiations were pending between the War Department and Mr. Rockefeller for the use of the property as a base hospital. The use of the tract by the government for a base hospital, if finally decided upon, will not deprive the city of its park site. If the hospital is built and the tract used it will only be for the duration of the war.

It would be an interesting coincidence if this historical site, on which American soldiers were killed and wounded in the War for American Independence should be used for the succor of American soldiers wounded in the present war for the independence of the United States and her liberty-loving allies.

Meanwhile, the title to the property remains with Mr. Rockefeller, and on March 14, 1918, it was leased for the period from May 1 to October 1, 1918, to Mr. Nicholas C. Parlos, at a rental stated to be $25,000. Pease & Elliman were the brokers; William A. White & Sons representing the Empire Mortgage Company, which acted for Mr. Rockefeller.

## WEST SIDE IMPROVEMENT

### Change of Jurisdiction

In our last Annual Report, at pages 252–285, we gave an extended review of the controversy over the proposed relocation of the New York Central Railroad tracks on the west side of Manhattan Island. Our account ended with the enactment of Senator Ottinger's bill, which became chapter 719 of the laws of 1917.

On June 12, 1917, announcement was made that the Board of Estimate and the New York Central Railroad Co. had dropped the proposed agreement. The significance of this was that if no agreement were reached between them before December 1, 1917, jurisdiction in the matter would pass to the Public Service Commission, and the railroad company would probably not be able to procure a fee simple in any of the city property as had been contemplated.

On June 15, at the request of the Port and Terminal Committee of the Board of Estimate, the committee was discharged from further consideration of the subject, and another committee, consisting of Borough Presidents Maurice E. Connolly of Queens, Marcus M. Marks of Manhattan, and Calvin D. Van Name of Richmond, was appointed to represent the board on a conference committee which was also to include two members of the Public Service Commission. Messrs. Connolly and Marks were known to be opposed to the agreement as proposed. The object of the committee was to continue negotiations with the New York Central Railroad Co. with a view to arriving at an agreement before December 1, 1917.

The negotiations, however, were unsuccessful, and late in November on the eve of the transfer of jurisdiction, the joint committee of the Board of Estimate and the Public Service Commission filed a memorandum with the Board of Estimate recommending the abrogation of the ordinance of 1847. It will be remembered that the railroad company was organized pursuant to chapter 216 of the laws of 1846, which granted the company a franchise to operate a railroad from Albany to New York provided that the assent of the municipal authorities should be obtained for the operation within the New York City limits. This assent was obtained in the ordinance of 1847. (For an extended notice of the memorandum above alluded to, see the New York Times of November 30, 1917.)

On December 1, 1917, the matter passed into the jurisdiction of the Public Service Commission as provided in the Ottinger law.

On December 3, the Public Service Commission directed its counsel to investigate the validity of the permits and franchises under which the New York Central Railroad Company is occupying streets and other public places, and the legal steps necessary to re-establish the public rights and interests in such places. It also instructed the chief engineer of the commission to prepare the necessary drawings for making changes in the tracks from Chambers street to the city line, so that the commission might be ready to proceed against the company as soon as the legal way was cleared.

The mode of the procedure under the new law, as explained by the chief counsel of the Public Service Commission, William L. Ransom, Esq., is as follows:

After a general plan is made providing for the removal of the tracks from grade and eliminating steam operation of trains, a copy of the plan must be submitted to the railroad company and the Board of Estimate, and then the Commission must hold a public hearing, after a two weeks' notice. After the hearing and the filing of the plans they become effective, and the railroad company must then remove its tracks from grade in the manner directed by the commission. All of the alterations in the structure must be made at the company's own expense, and must be completed within two years, unless the commission extends the time. After the two years' period the operation of trains on grade or by steam becomes a violation of law, and the commission has the power of obtaining a peremptory writ of mandamus to compel the company to make the changes.

### The Governor's West Side Commission

Meanwhile, Governor Charles S. Whitman appointed the following commission to inquire into the West Side question: Messrs. William H. Van Benschoten, Chairman, Danforth E. Ainsworth, Charles A. Beard, Cyrus C. Miller, Ralph S. Rounds, Henry L. Stoddard, and Hiram C. Todd. Ex-Justice John C. Clark of the Supreme Court was chosen counsel.

The Governor's commission held its first public hearing in the library of the Chamber of Commerce of the State of New York, at No. 65 Liberty street, New York City, on December 12, 1917, at which Hon. Calvin Tomkins, former Dock Commissioner, was the only speaker.

On December 18, 1917, the Governor's commission held its second hearing, at which Comptroller William A. Prendergast spoke.

On December 19, the Governor's commission held its third public hearing, and listened to Mr. Ira A. Place, Vice-President of the New York Central Railroad Company.

On December 20, the Governor's commission held its fifth public hearing. The speakers were Public Service Commissioner Charles S. Hervey and Borough President Marcus M. Marks.

On December 28, the Governor's commission held its sixth public hearing, at which Mayor John Purroy Mitchel spoke.

The newspapers of the days following the foregoing hearings by the Governor's commission may be consulted for reviews of the testimony of the various witnesses. Most of the testimony was a repetition of opinions and arguments, pro and con, heretofore advanced. It was charged and denied that the railroad company wanted to secure a monopoly and privileges at the expense of the city; and Mayor Mitchel declared that the agreement of 1916, which needed only a few changes to make it acceptable to both the Board of Estimate and the railroad company, was sidetracked by the efforts of " a number of demagogues, political nondescripts, and other persons of similar characteristics who infest big cities."

### Hudson River Tunnels Proposed

The most original turn to the discussion was brought about by the unprecedented cold wave which visited New York December 30 and succeeding days, in conjunction with the freight congestion and the coal shortage. Early on the morning of January 3, 1918, the Pennsylvania Railroad Co. hauled 70 tons of coal through its tube under the Hudson river, Manhattan island and East river, from New Jersey to Long Island. This was the first time that freight had passed through the Pennsylvania tunnel, and it gave a striking illustration of the possibilities of tunnel communication between New York and New Jersey, not only when the river is frozen, but also under ordinary conditions. This subject of tunnels and the utilization of the extensive meadows of New Jersey for storage and exchange of freight cars as a relief for the West Side situation was not, however, in itself new. (See monograph by Dr. George Frederick Kunz, President of this Society, in our Annual Report for 1913, at pages 401–449.) But its bearing on the problem was rendered apparent by the exigencies which arose in January.

On January 3, 1918, at the hearing before the Governor's commission on the West Side question, testimony was given by Mr.

Theodore P. Shonts, President of the Interborough Rapid Transit Co., and Mr. Frederick D. Underwood, President of the Erie Railroad Company. Mr. Shonts told of the plan he had outlined in 1912 and 1913, which provided for large central yards in the New Jersey meadows, with subways running through various traffic zones to be established in the various boroughs. Large warehouses were to be built in these zones and in this way shippers would be brought into direct connection with the railroads.

In reply to a question, Mr. Shonts said that to build a bridge across the Hudson river would cost, according to the latest estimate, $42,000,000, while a tunnel could be built for about $6,000,000. It was his opinion that about 19,000 trucks were being used throughout the city for cartage purposes. If all freight were brought across the river by rail or by a vehicular tunnel, the river could be kept clear for ocean steamships.

Mr. Shonts said that the commerce of the New York Central Railroad Company should not be considered singly, but as part of a general plan. Under government control, he asserted, this port would be operated by one head in order to obtain the greatest efficiency. For thirty years, he said, the railroads had been trying to accomplish the same thing, and if the railroads would pool their properties here, or else create a new organization and build proper connecting lines to a great common clearance yard, there would be a saving of from 60 to 70 per cent in power, coal, and wages. This had been demonstrated in the west, he said.

### General Goethals Recommends a Driven Tunnel

During the cold wave of January, 1918, publicity was given to the report of General George W. Goethals, builder of the Panama Canal, on the subject of a Hudson river tunnel. Both New York and New Jersey have a commission at work on the problem of better communication between New York City and New Jersey, either by bridge or by tunnel, with the prevailing opinion in favor of a tunnel. Recently the joint commission requested Gen. Goethals to examine the plans already made for a tunnel and give his opinion on them. The plans contemplate a tunnel under the Hudson river from Canal street, New York

City, to 12th street, Jersey City, for the use of vehicles and pedestrians. Gen. Goethals reported as follows:

"The plans already made are two in number, and are of different types of construction, one to be built by what is known as the shield method, and the other by the open-trench method. Of the types proposed the trench method is the more attractive and has advantages which make it the preferable one, provided there are no construction difficulties which make its adoption undesirable.

"To build the tunnel it is proposed to excavate a trench, the bottom of which is to be 80 feet below mean low water, and to have a width of 40 feet; to drive piles in this trench, 5-foot centres across it, and 8-foot centres longitudinally, these piles to be from 40 to 70 feet long after they have been cut off at the proper elevation, so that the tunnel will have under it a rock or a pile foundation, thus assuring the greatest stability.

"Borings were made over the section of the river that the tunnel will occupy, in order to determine the character of material and the depths to rock; test piles were driven to ascertain the practicability of their use for a foundation in those portions of the section where rock was not available, methods were studied for cutting off the piles at the proper elevation, with assurances that such results could be secured, but, unfortunately, no steps were taken to determine the practicability of securing the trench and maintaining it for a time sufficient to drive the piles, to cut them off, and to sink into place the tunnel section — assumed to be 80 feet long.

"The material through which the trench must be dug is soft silt and mud. Some idea of the fluidity of the material may be had from tests made by dropping a pole 48 feet long, weighing 55 pounds, of which 38 feet was of wood 2½ inches in diameter, 10 feet of ⅝ inch diameter steel; under its own weight it penetrated the material to a depth of from 27 to 36 feet. The upper stratum in close proximity to the water is in such a liquid state as to be set in motion by the passage of deep-draft vessels. It is true that the material becomes more compact at the greater depths, yet it is equally true that water admitted to the lower stratum reduces these to the same consistency as the upper stratum, which will be the case if they are reached during the progress of the dredging operations.

"It is a significant fact that while making the borings to rock, referred to above, no drive samples could be secured at any depth through the silt and mud. When dredging for increased depths of channel, much more material must be removed than prism calculations indicate, yet such deepening is in the direction of the

currents; the side slopes are not sufficiently defined to be determinable. To cut a deep trench across the tidal currents through material which reduces to a practically fluid state when water has access to it becomes a more serious and difficult task.

"The so-called Hudson river silt consists of minute particles of trap, granite, sand — the result of erosion of the rock formations formed along its banks. It overlies the rock as an unstable mass, affected by tidal fluctuations and temperature changes. It can be handled easily by dredges, but the very character of the material precludes the possibility of securing a trench of the dimensions required within a reasonable time and at a reasonable cost.

"Consideration has been given to the use of sheet piling, so arranged and disposed as to give a uniform slope from the surface of the mud to the bottom of the trench, and also to the freezing method; but both were abandoned.

"Under these circumstances I regret that I am forced to the conclusion that the trench method is impracticable for constructing the tunnel on the site selected, and I recommend the adoption of the shield method.

"While collecting data and investigating the material through which the trench must be dug, consideration was given to the varying sections proposed, together with other details of construction noted in the report to the Public Service Corporation; the location of the tunnel in the slip or under the pier, and other matters dealt with by the report; but in view of the conclusions reached concerning the method a discussion of them is not necessary.

"A question has been brought up in connection with vehicular tunnels for motor-driven vehicles which merits consideration, since it has been asserted that such tunnels are not practicable, based on the belief that carbon monoxide will be present in dangerous quantities. The insidious and deadly effect of the poisonous gases are not to be depreciated. By theoretical discussion attempts have been made to show that the air in a tunnel permeated by such gases would be injurious to health. The fact remains, however, that motor vehicles operate through the tunnels under the Thames river without disastrous results, and these have no artificial ventilation. That the tunnels in question have not the length of the proposed Hudson tunnel is a scarcely valid objection, since by ventilation the sections of the former can be duplicated in the latter, and it would be fair to assume the results will be the same.

"As a matter of fact, the air can be withdrawn from and introduced at as many points along the line of the tunnel as desired, thus subdividing the structure into a number of small sections.

The tests made by the Public Service Corporation of New Jersey, combined with opinions of engineers versed in the subject, confirm my belief that a proper system of ventilation will maintain the air sufficiently pure to remove any apprehension on this score.

"As between a single or a pair of tunnels, I would advocate the former, made large enough to provide for slow trucking below, and the faster, lighter motor cars above. The cost can be reduced by using concrete blocks molded as voussoirs of an arch or ring, properly keyed, in lieu of steel or cast iron. It is estimated that such a tunnel can be constructed at present market prices for material and labor for a sum not exceeding $12,000,000."

### Report of Governor's West Side Commission

On January 9, 1918, Comptroller Charles L. Craig, as a witness before the Governor's commission, advocated a six-track subway under Tenth and Eleventh avenues as far south as Canal street, for the transportation of freight, and urged that it be operated by the city so that all railroads would have equal access to it.

On January 31, 1918, the Governor's commission made its report, suggesting a plan with three main bases of settlement and twelve specific recommendations as follows:

(1) The construction of a municipal terminal system by the city in agreement with the various railroads; or

(2) The arrangement of a unified joint terminal system on the west side of Manhattan by agreement with the New York Central and other railroad and transportation companies concerned, or the construction of such terminal system by a private terminal company; or

(3) By imposing, if necessary, compulsion upon the various railroads to require them to construct and operate all necessary terminal facilities, or if such facilities have been constructed, to join in the use and operation of the same.

The twelve specific recommendations to be used in working out the main plan chosen are as follows:

1. A subway or elevated freight terminal system along the west side beginning at Sixtieth street and continuing south as far below Canal street as traffic may require, with intermediate zone stations; this system to be used by all the railroads delivering freight on the west side of Manhattan.

2. A tunnel or tunnels under the Hudson river to handle New York City freight, connecting classification yards in New Jersey with the terminal system in Manhattan.

3. Through Riverside Park tracks of the New York Central should not be extended east of the present right of way, should be covered and depressed to a depth determined upon by engineers as feasible in view of the waterfront and operating conditions. All improvements along the river front from Seventy-second street to Spuyten Duyvil should be arranged with full consideration of parks and residential requirements.

4. Any enlargement of the trackage north of Sixtieth street should be made with due regard to the needs of the increasing population of Harlem and the Bronx, and to the question of local and suburban passenger service on the west side.

5. The Manhattanville yards should be located east of the main line tracks.

6. Steam as a motive power in New York City should be eliminated.

7. All railroad tracks on the west side of Manhattan along the streets and avenues should be removed from street level.

8. The city's policy of owning its waterfront should be enforced and extended, and provision should be made for unobstructed access along streets to the waterfront as public needs require.

9. Consideration of a plan for store door delivery by motor trucks, to work in harmony with the terminal system.

10. Provision as to the location of terminal markets.

11. Provision as to the enlargement of the terminal facilities to cover other sections of the city and to fit in with any general plan of the port.

12. Pending execution of comprehensive plans, any adjustment or action involving the rights and facilities of the New York Central Railroad should be in harmony with the foregoing features.

On January 31, 1918, Senator Ottinger introduced in the State Senate a bill (introductory No. 268) to carry out the recommendations of the Governor's commission. It is entitled "An act to provide for railroad terminal improvements in cities having over one million inhabitants and to create commissions with full powers to arrange for and compel such improvements and to transfer to such commissions certain jurisdiction, supervision, duties and powers of the Public Service Commission and to repeal chapter 777 of the laws of 1911 and chapter 719 of the laws of 1917, and for other purposes." The bill provides that the short title of the law, if enacted, shall be the Terminal Commission Law. The

bill covers 28 pages. It declares that the manner in which the franchise, terminal facilities and rights of the New York Central and other railroad companies operating within the City of New York and generally within cities having a population of over 1,000,000 inhabitants "is a matter of public interest" which may be inquired into, and regulated and controlled by the State. It then authorizes the establishment, in each city having over a million inhabitants, of a Terminal Improvement Commission of seven members. According to reprint No. 1421, the Mayor, Comptroller and President of the Board of Aldermen are to be three members of the commission; two Public Service Commissioners designated by the Governor are to be members; and the Governor is to appoint three more members, by and with the advice and consent of the Senate. The commission is empowered:

1. To facilitate municipal terminal improvements.

2. To agree with the New York Central Railroad Co. or other transportation company in behalf of the city concerning the making of terminal improvements.

3. To negotiate and agree immediately with the New York Central Railroad Company in aid of a comprehensive plan for the improvement of freight facilities.

4. To compel the making of terminal improvements.

5. To subject terminal facilities to joint uses by any corporation.

6. To require any transportation company, upon reasonable terms, to use freight terminals and facilities subject to the commissioner's jurisdiction.

7. To elevate, depress and safeguard terminal facilities.

8. To provide for terminal markets.

9. To accept the delegation of law and full authority from the United States Government.

The commission is also given power to condemn property.

Upon the adoption of any plan, the Terminal Commission succeeds to any powers of the Public Service Commission over such plan.

The bill also contains other interesting provisions. It was drawn as a general act so as not to be subject to the veto of the Mayor of the City of New York.

On February 28, 1918, a public hearing on the Ottinger-Adler bill was held before the Senate Committee on Cities. Mr. Ira A. Place, Vice-President of the New York Central Railroad Company, was one of the speakers. The bill was opposed by Mr. Edward J. McGoldrick, Assistant Corporation Counsel, representing the City of New York; Public Service Commissioner Charles S. Hervey; and Mr. R. A. McGahen, representing the Citizen's Union. Comptroller Craig opposed it by telegram. Mr. Richard C. Harrison expressed the approval of the City Club.

On April 9, the bill was defeated in the Senate by a vote which lacked three of the constitutional majority of 26. Senator Robert F. Wagner led the opposition.

## FOREIGN WAR MISSIONS

### Impressive Receptions in New York City

The receptions tendered by the City of New York to the war missions from allied countries in 1917 were notable events historically and profoundly impressive as public functions. It was not the outward display that made these occasions impressive. The City Hall and its environment have been more profusely, although not more artistically, decorated before, and there have been more magnificent processions than those which escorted the distinguished visitors to the seat of the municipal government. The significance of these ceremonies was three-fold: In the first place, they gave outward evidence,— which in the spring and early summer of 1917 was not especially abundant — that this country was at war. Secondly, they gave a succession of testimonies of a community of interest which had never before existed with us and several European governments in matters affecting the very existence of their and our nations. And thirdly, they presented the spectacle, deeply touching to many who looked beyond the outward ceremonies, of great strong nations of the old world coming to young America for help to preserve the civilization which they had developed through centuries of painful evo-

lution. Never have more eloquent addresses been delivered in New York City within the memory of the living generation than those spoken in the City Hall and at the other functions attending the receptions; and it was the public consensus irrespective of political parties, that the City had never been represented in a more dignified and becoming manner by its Chief Magistrate than it was on these occasions.

It is a matter of regret to this Society that no formal record of those historic occasions was kept by the City, and future generations must depend upon the fragmentary accounts in the daily press for their knowledge of what was said and done. In the early history of this Society, its founder, the late Andrew H. Green, advocated the creation of the office of City Remembrancer in New York City for the purpose of chronicling important events in current history of the metropolis. Had there been a City Remembrancer in 1917 there would have been an adequate history of the receptions of the war missions. The following brief memoranda will serve to refer the reader to the public prints of the given dates for further particulars.

### French War Mission

The French war mission arrived in New York on Wednesday, May 9, 1917. Its members were:

Marshal Joseph Joffre

| | |
|---|---|
| M. Rene Viviani | Viscount de Jean |
| Rear Admiral Chocheprat | Lieut. Col. Fabry |
| Marquis de Chambrun | Lieut. Com. Geo. E. Simons |
| Emile Hovelaque | Lieutenant de Tessan |

The commission came from Philadelphia and landed at the Battery from the police boat Patrol at 4:35 p. m. Their arrival was greeted with the blowing of whistles and sirens on the vessels in the harbor and tremendous cheering from the immense throng gathered in Battery park. When the visitors landed they were received by a sub-committee of the Mayor's reception committee, which included the following:

Joseph H. Choate

| | |
|---|---|
| Robert Bacon | Dudley Field Malone |
| Lt. Com. J. L. Buchanan, U. S. N. | H. Snowden Marshall |
| Major Fox Connor, U. S. A. | George McAneny |
| Col. Spencer Cosby, U. S. A. | Frank Polk |
| Paul Fuller | William A. Prendergast |
| Leon G. Godley | Isaac N. Seligman |
| Maj. U. S. Grant, U. S. A. | Capt. Philip H. Sheridan, U. S. A. |
| Phoenix Ingraham | R. A. C. Smith |
| Otto H. Kahn | Willard D. Straight |
| Thomas W. Lamont | Cornelius Vanderbilt |
| Clarence H. Mackay | George W. Wickersham |

George T. Wilson

The guests and hosts entered twenty-four automobiles decked with flags, and, preceded by Squadron A, passed up Broadway to the City Hall between walls of enthusiastically cheering humanity. Marshal Joffre, sitting with Mr. Choate, was the idol of the crowd, his presence wherever he appeared during this and the succeeding days being the signal for extraordinary popular demonstration.

The City Hall and plaza in front of it were decorated according to plans made by Mr. Grosvenor Atterbury. A conspicuous feature of the decorations were large circular medallions bearing two heads representing France and Britannia by Mr. Edwin H. Blashfield. The French tri-color was also conspicuous in the midst of the flags of the United States, State and city. Over the dilapidated fountain in City Hall park was erected a pyramidal stand upon which were massed about 1200 Boy Scouts, while the Old Guard and Veteran Artillery Corps in their picturesque costumes and many thousands of school children prettily dressed added to the brilliance of the scene. Within the City Hall uniformed members of the above organizations and the Washington Continental Guard stood around the balcony of the second floor overlooking the rotunda stairs, holding various historical flags of the United States.

Just before the arrival of the French visitors, Rear Admiral Usher, U. S. N., commanding the Brooklyn Navy Yard, and Major General J. Franklin Bell, U. S. A., commanding the Department of the East with headquarters at Governor's Island, with their respective staffs, arrived.

The arrival of the visiting party was greeted with a demonstration of cheering, the like of which could not be remembered. Its roar could be heard inside of the City Hall for several minutes before the actual appearance of the guests, growing louder and louder as the party came up Broadway and entered the City Hall plaza.

The desks and seats in the Aldermanic chamber had been removed, and the space was filled to its utmost capacity with leading citizens, standing in compact order, leaving only an aisle open from the door to the platform. The chamber resounded with cheers when the party, led by Mayor Mitchel and Marshal Joffre, entered.

Speeches were then delivered in turn by Mayor Mitchel on behalf of the city, Joseph H. Choate on behalf of the citizens, and M. Viviani on behalf of the visitors. The text of their speeches will be found in the daily papers of May 10, 1917, but nothing can express the feeling that pervaded the proceedings. There was a solemnity, impressiveness and deep intensity of sentiment which the writer of these pages, who has witnessed many of the historic occasions in New York City, has never seen before.

After the City Hall exercises, which lasted until 5:55 p. m., the visitors were escorted to the residence of Mr. Henry C. Frick at No. 1 East 70th street. Enthusiastic throngs lined the way from the City Hall to the Frick mansion, especially Fifth avenue, which was beautifully decorated with flags, streamers and decorated columns.

On Tuesday morning, May 10, 1917, at a gathering in Central Park, Marshal Joffre was presented with a miniature statue of Liberty, made of gold and silver, standing upon a base made from an oak timber from Fraunces' tavern. The gift was the enterprise of the New York World.

Later in the morning the French commission attended the unveiling of a statue of Lafayette in Prospect Park, Brooklyn.

At noon the visitors were entertained at luncheon by the Merchants' Association at the Hotel Astor, then went to Columbia University, where the degree of LL.D. was conferred upon Marshal Joffre, M. Viviani, Arthur James Balfour (in absentia) and Lord Cunliffe, the latter two being senior members of the British war

mission. After this, the party visited Grant's tomb at Claremont and the statue of Joan of Arc at Riverside drive and 93d street. In the evening there was a reception in the New York Public Library, and a gala performance at the Metropolitan Opera House.

On Friday morning, May 11, 1917, the visitors left for Newburgh to visit Washington's headquarters, and for West Point to visit the United States Military academy.

### British War Mission

The British war mission arrived in New York City on Friday, May 11, 1917. Its members were:

Right Hon. A. J. Balfour

| | |
|---|---|
| Rt. Hon. Sir Eric Drummond | Major C. E. Dansey |
| Ian Malcolm, M. P. | Rear Adm. Sir Dudley R. S. de Chair |
| C. F. J. Dormer | Fleet Paymaster Gen. V. A. Lawford |
| Geofrey Butler | Rt. Hon. Lord Cunliffe |
| Lieut. General Bridges | Sir S. H. Lever |
| Colonel Heron | A. D. Patton |
| Capt. H. H. Spender-Clay | W. T. Layton |
| Major L. W. P. Rees | |

The reception of the British mission followed very closely the order of the French reception two days before. The official party arrived by train from Philadelphia at Communipaw about 3:20 p. m. and were taken to the Battery in the police boat Patrol. At Communipaw they were greeted by Mr. George T. Wilson, Chairman of the Executive Committee of the Mayor's committee, and Messrs. J. P. Morgan, Dudley Field Malone, Bernard M. Baruch, William A. Prendergast, Cleveland H. Dodge, Eugene H. Outerbridge, R. A. C. Smith, Theodore Rousseau, and First Deputy Police Commissioner Leon G. Godley. The latter had charge of the police arrangements for all of the receptions of the war missions.

The party arrived at Battery park at 3:35 p. m. and were received with acclamation by a throng equal to that which greeted the French visitors. Troops E and F, First Cavalry, N. G. N. Y., and two squadrons of mounted policemen preceded the motor cars in which the visitors and their escorts were taken to the City Hall. In the escorting party were the following gentlemen, among others:

Joseph H. Choate

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|---|---|
| Vincent Astor | Dudley Field Malone |
| Bernard M. Baruch | John Mitchell |
| James M. Beck | J. P. Morgan |
| George W. Burleigh | Wm. Fellowes Morgan |
| George A. Cormack | Eugene H. Outerbridge |
| Chauncey M. Depew | Alton B. Parker |
| Cleveland H. Dodge | Lewis H. Pounds |
| Frank L. Dowling | William A. Prendergast |
| William N. Dykman | M. Taylor Pyne |
| Samuel W. Fairchild | Theodore Rousseau |
| Leon G. Godley | R. A. C. Smith |
| A. Barton Hepburn | John B. Stanchfield |
| Charles E. Hughes | Henry L. Stimson |
| Phoenix Ingraham | William H. Wadhams |
| Martin W. Littleton | George T. Wilson |

Sir Cecil Spring-Rice, British Ambassador, and representatives of the United States government were also in the party.

The scene along Broadway to the City Hall was a repetition of those of Wednesday, and the same crowds and cheering greeted the party at the City Hall. The City Hall itself was disfigured by the fire the day before which had ruined the cupola, no attempt to repair which had been made.

The color guard at the railing of the second floor in the rotunda and the throng in the Aldermanic chamber were counterparts of those of the preceding reception.

The speeches were by Mayor Mitchel, Mr. Choate, and Mr. Balfour.

After these exercises, the visitors were escorted, amid welcoming crowds, to the residence of Mr. Vincent Astor at Fifth Avenue and 65th street, where the official party was entertained during its visit.

In the evening, an official dinner was given to the British and French commissioners at the Waldorf-Astoria hotel.

On Saturday, Mr. Balfour and his colleagues were entertained at luncheon by the Chamber of Commerce. About a thousand persons were present. Mr. Eugene H. Outerbridge, President of the Chamber of Commerce, presided.

In the evening, Mr. Balfour went to the residence of Mr. Choate at 8 East 63d street, where a dinner for a small company was served.

On Sunday morning, Mr. Balfour, Mr. Choate, and others attended service at the Cathedral of St. John the Divine. The Cathedral was not large enough to hold the throng that sought admission. This was Mr. Choate's last public appearance, as elsewhere stated.

Sunday afternoon, Mr. Balfour went to Oyster Bay to visit Col. Theodore Roosevelt.

At midnight, he left for Washington.

### Italian War Mission

The royal Italian mission arrived in New York on Thursday, June 21, 1917. Its members were:

Ferdinand of Savoy, Prince of Udine
Marquis Luigi Borsarelli di Rifreddo

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|---|---|
| Enrico Ariotta | Cavaliere de Parente |
| Senator Guglielmo Marconi | Lieutenant de Zara |
| Augusto Ciuffelli | General Guglielmotti |
| Francesco Saverio Nitti | Aldo Cussutto |

Dr. Nicholas Murray Butler, Chairman of the Mayor's reception committee, Mr. Lloyd C. Griscom, Chairman of the Executive Committee, Mr. George T. Wilson, Vice-Chairman, Mr. Thomas W. Lamont, Chairman of the Finance Committee; Mr. Arthur Bennington, Secretary; Mr. Theodore Rousseau, Secretary to the Mayor; and Major-Gen. Daniel Appleton and staff, met the guests at Communipaw and escorted them to the Battery, where they arrived about 3:30 p. m.

At Battery park a delegation of prominent citizens received the visitors as they landed, and an enormous crowd gave an enthusiastic popular demonstration. Twenty-five automobiles transported the visitors and their hosts to the City Hall, with a repetition of the scenes witnessed on similar occasions before, the crowds on this occasion being distinguished by their large proportion of Italian citizens.

At the City Hall the 9th Coast Defence Command acted as guard of honor, and 2000 school children occupied the open space in the plaza. The decorations consisted of poles with streamers, festoons, and medallions, in which Italian colors and motives predominated.

Mayor Mitchel greeted Prince Udine and his colleagues at the City Hall and escorted them to the Aldermanic chamber, where addresses were delivered by Mayor Mitchel, Dr. Butler, and Prince Udine.

From the City Hall Prince Udine was escorted to the residence of Mr. Pembroke Jones, at No. 5 East 61st street. On the way, the party paused at the Garibaldi statue in Washington square for a brief tribute. Fifth Avenue was decorated with designs of an Italian character and was thronged with enthusiastic multitudes.

In the evening, Mayor Mitchel gave a dinner of 75 covers at the Plaza hotel in honor of the royal party. Among the guests were Governor Whitman.

On Friday, the guests were entertained at luncheon by the Merchants' Association at the Hotel Astor, after which they visited the house in which Garibaldi lived at Rosebank, Staten Island. The police estimated that 40,000 persons gathered at the Garibaldi memorial, while others estimated the number as high as 75,000 or 100,000. The pilgrimage was arranged by the Order of the Sons of Italy, of which Mr. Steffano Miele is Grand Master.

In the evening, a banquet was given at the Waldorf-Astoria hotel, at which there were 1,000 guests seated at the tables, and several hundred spectators in the balconies. Mayor Mitchel presided.

The principal event of Saturday, June 23, 1917, was the reception at the Stadium of the College of the City of New York. This affair was in charge of a sub-committee consisting of:

George McAneny, Chairman
Edward Hagaman Hall, Secretary

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|---|---|
| Arnold W. Brunner | Anthony Pugliese |
| Salvatore A. Cotillo | Vittorio Racca |
| Martin W. Littleton | Antonio Stella |
| Sidney E. Mezes | Luigi Reali |
| Angelo Patri | Julio Setti |
| Antonio Pisani | Moses J. Stroock |

George T. Wilson

Mr. Brunner designed and had charge of the decorations, and Dr. Hall had charge of the general arrangements at the Stadium. The rostrum was erected in the middle of the Stadium facing the amphitheatre of seats. The stadium field and the seats were filled,

and thousands were unable to gain admission. It was estimated that 50,000 persons were in the Stadium and adjacent open spaces. Marching Italian organizations converged from all parts of the town, and the massing of their brilliant banners in the vicinity of the rostrum, at Mr. Brunner's suggestion, added to the picturesque effect already produced by his classical draperies on the platform and amphitheatre. In front of the amphitheatre opposite the rostrum sat a large chorus from the Metropolitan Opera Company under the direction of Mr. Setti.

The royal party assembled in the College of the City of New York, and were escorted by Mayor Mitchel, Mr. McAneny, Dr. Mezes and members of the faculty — the latter in academic gowns — to the rostrum. The program was as follows:

1 March —"The Stars and Stripes".....Sousa
2 (a) The Royal Italian March.
(b) The Star Spangled Banner..Mme. Alda and Chorus
3 Address — Honorable John Purroy Mitchel, Mayor of the City of New York, presiding.
4 Address — Dr. Nicholas Murray Butler, Chairman of the Mayor's Committee.
5 (a) Hymn of Garibaldi.
(b) Hymn of Mameli.....Chorus
6 Address — His Excellency, Marquis Luigi Borsarelli di Rifreddo, Under Secretary of State for Foreign Affairs.
7 Address — Honorable Augusto Ciufelli, Member of the Chamber of Deputies.
8 Address — Honorable Francesco Saverio Nitti, Member of the Chamber of Deputies.
9 (a) Rule Britannia.....Mme. Alda and Chorus
(b) La Marseillaise.....Mr. Rothier and Chorus
10 Address — Hon. John J. Freschi, for the Italian residents of New York.
11 (a) The Royal Italian March.
(b) The Star Spangled Banner.
12 March —"American Republic".....Lathier

The Prince took luncheon at the residence of Dr. Nicholas Murray Butler; and in the afternoon received the Dante League at Mr. Pembroke Jones' residence, which was the Prince's home while in New York. In the evening, the royal party went to see

"The Follies" at the New Amsterdam theatre; then dined at the home of Col. Cornelius Vanderbilt, No. 667 Fifth Avenue; and attended a gala concert at Carnegie Hall.

### Russian War Mission

The Russian war mission was received in New York City on Friday, July 6, 1917. Its members were:

Boris A. Bakhmetieff

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|---|---|
| Lieutenant General Roop | Colonel Oranovsky |
| Professor Lomonosoff | Captain Visotsky |
| Professor Borodin | Baron Ginsburg |
| M. Novitsky | M. Lebedeff |
| Ivan Soukin | M. Balhoff |
| Eugene Omelchenko | M. Postnikoff |
| Captain Chitt | M. Zak |
| Lieutenant Martinoff | M. Pertzoff |
| Lieutenant Karpovich | M. Puskareff |

They arrived at Battery park about 4:30 p. m. and reached the City Hall at 5 o'clock. An immense crowd in the park gave an enthusiastic and spontaneous welcome. The decorations along Broadway and at the City Hall were freely mingled with Russian flags. Mayor Mitchel, Hon. Martin W. Littleton and Ambassador Bakhmetieff were the speakers. From the City Hall the official party was conducted amid popular demonstrations to the residence of Mr. Adolph Lewisohn. After a brief reception at Mr. Lewisohn's home, the members of the mission were guests at a private dinner at the Ritz-Carlton hotel.

In the evening, there was a great meeting in Carnegie hall. Mayor Mitchel presided, and the other principal speakers were Mr. Samuel Gompers, Col. Roosevelt and the Russian ambassador. An earnest exchange between Col. Roosevelt and Mr. Gompers concerning the East St. Louis riots was the sensation of the evening.

On Saturday morning, July 7, 1917, the mission was entertained by the annual exhibition of the fire department in the Stadium of the City College. A feature of the exhibition was the burning of a three story building and the operation of the department in extinguishing the fire.

The mission was entertained at luncheon at Claremont by the Mayor, and in the afternoon attended a great open air concert on

the mall in Central Park. It is estimated that 15,000 persons were present at the latter.

In the evening, a great mass meeting was held in Madison Square Garden, at which 14,000 persons were present. The proceedings were somewhat disturbed by demonstrations against a continuance of the war.

On the succeeding days, the mission was shown about the city. An event of the 9th was a tremendous ovation at the Henry street settlement house.

### Belgian War Mission

The Belgian war mission arrived in New York City on Monday night, August 20, 1917. Its members were:

Baron Ludovic Moncheur

General Leclercq — Lieut. Count Louis d'Ursel

Major Osterrieth — Hector Cartier

Jean de Mertens

It was met at the Pennsylvania Railroad station by Messrs. George T. Wilson, Wm. A. Prendergast, Robert Adamson, Frederic R. Coudert, Gen. Daniel Appleton, and other prominent citizens, and escorted to the Hotel Biltmore.

At the request of the visitors, their welcome was very simple.

On Tuesday morning, the visitors were formally escorted through some of the principal parts of the city north of 42d street to the Hudson river at 125th street, where they embarked on the police boat and were taken to the Battery. From Battery park they were escorted to the City Hall amid demonstrations similar to those which had marked the arrival of the previous missions.

The decorations at the City Hall were varied so as to accentuate the Belgian national colors. The guard of honor at the City Hall consisted of the Seventh Regiment, 500 sailors and 200 marines from the Navy Yard, the American Junior Naval Scouts and the Boy Scouts.

The speakers in the Aldermanic chamber were Mayor Mitchel, Mr. Frederic R. Coudert and Baron Moncheur.

On their way to the Biltmore, they paused at Washington square long enough to receive a flag from the employes of John Wanamaker.

After luncheon at the Biltmore, they were taken in automobiles across the Queensboro bridge and through Queens and Brooklyn boroughs to Coney Island.

A private dinner of about 75 guests and an entertainment in the Amsterdam roof garden occupied the evening.

On Thursday, the party visited ex-President Roosevelt at Oyster Bay.

### Japanese War Mission

The Japanese war mission was received in New York City on Thursday, September 27, 1917. Its members were:

Viscount K. Ishii

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|---|---|
| Aimaro Sato | Capt. Kichisaburo Nomura |
| Vice Admiral Takeshita | Lt. Col. Takezo Mizumachi |
| Major General Sugano | Commander Viscount Masamichi Hotta |
| Masanao Hanihara | Minoru Fujii |
| Matsuzo Nagai | Madam Fujii |
| Commander Ando | Hiroshi Saito |
| Tadanao Imai | Eishiro Nuida |
| Tashira Owaku | Yoshio Iwato |
| Douglas L. Dunbar | Toshio Shiratori |
| Tokichi Tanaka | |

They landed at Battery park at 3:25 p. m., where Squadron A of the 1st New York Cavalry and the 2d Battalion of federalized Naval Militia were on guard. A great throng of people filled the park as on the former occasions, and the party was welcomed by a committee appointed by the Mayor, of which Hon. Elbert H. Gary was Chairman.

Two companies of the depot battalion of the 22d Infantry led the procession to the City Hall. Brig. Gen. Hoyle, U. S. A., commander of the Department of the East, and Rear Admiral Usher, U. S. N., were of the escorting party.

The Japanese emblem of the rising sun was the dominant note of the decorations at the City Hall. In the open space in front of the City Hall were three companies of the depot battalion of the 7th regiment, 1,000 American Junior Naval and Marine Scouts, and thousands of citizens.

The speeches were by Mayor Mitchel, Judge Gary, and Viscount Ishii.

From the City Hall the visitors were escorted to the residence of Judge Gary at No. 856 Fifth Avenue, where they were entertained at private dinner and were Judge Gary's guests for the night.

## FOURTH OF JULY IN NEW YORK

### Eighth "Safe and Sane" Celebration

New York City had its eighth "safe and sane" celebration of Independence Day on Wednesday, July 4, 1917.

Historical notes concerning the Declaration of Independence itself will be found in our Annual Report for 1913 at pages 467–484. John Adams' prediction concerning the celebration of Independence Day is quoted in our Report for 1917 at page 208. The origin of the "safe and sane" celebrations is stated in the latter volume at page 209, and accounts of the seven preceding celebrations will be found in our current Annual Reports.

### Officers of the Mayor's Committees

Following are the names of the executive officers of the Mayor's Independence Day Committees since the beginning of the new form of celebration.

*Administration of Mayor William J. Gaynor*

1910. Chairman, John H. Finley, Ph. D., LL.D.; Vice-Chairman, William Allen Marble; Treasurer, James S. Cushman; Secretary, William A. Johnston.

1911. Chairman, Hon. Herman Ridder; Vice-Chairman, Edward Hagaman Hall; Treasurer, Isaac N. Seligman; Secretary, William A. Johnston.

1912. Chairman, Hon. Herman Ridder; Vice-Chairman, Edward Hagaman Hall; Treasurer, Isaac N. Seligman; Secretary, William A. Johnston.

1913. Chairman, Hon. Herman Ridder; Vice-Chairman, Benedict J. Greenhut; Treasurer, Isaac N. Seligman; Secretary, Edward Hagaman Hall.

*Administration of Mayor John Purroy Mitchel*

1914. Chairman, Hon. Martin W. Littleton; Vice-Chairman, John M. Shaw; Treasurer, Isaac N. Seligman; Secretary, Edward Hagaman Hall.

1915. Chairman, Hon. George Gordon Battle; Treasurer, Isaac N. Seligman; Secretary, Carl Beck.

1916. Chairman, Hon. George Gordon Battle; Treasurer, Isaac N. Seligman; Secretary, Carl Beck.

1917. Chairman, Hon. George Gordon Battle; Treasurer, Isaac N. Seligman; Secretary, Edward Hagaman Hall; Assistant and Acting Secretary, Addison A. Van Tine.

### Finances of the Celebrations

For these celebrations the City has appropriated the following sums:

| | | | |
|---|---|---|---|
| 1910 | $15,000 | 1914 | $28,500 |
| 1911 | 50,000 | 1915 | 10,000 |
| 1912 | 50,000 | 1916 | 25,000 |
| 1913 | 25,000 | 1917 | 25,000 |

The appropriation for 1917 was included, for the first time, in the budget of the Board of Estimate and Apportionment.

In addition to the foregoing, the Mayor's Committees have raised by subscriptions and disbursed the following amounts:

| | | | |
|---|---|---|---|
| 1910 — Subscriptions, about | | | $14,000 00 |
| Disbursements, about | | | 14,000 00 |
| 1911 — Subscriptions and interest | | | $13,013 47 |
| Disbursements | | | 11,138 53 |
| Balance to successors | | | $1,874 94 |
| 1912 — Balance from predecessors | | $1,874 94 | |
| Subscriptions and interest | | 10,607 10 | |
| | | | $12,482 04 |
| Disbursements | | | 9,712 20 |
| Balance to successors | | | $2,769 84 |
| 1913 — Balance from predecessors | | $2,769 84 | |
| Subscriptions and interest | | 6,670 74 | |
| | | | $9,440 58 |
| Disbursements | | | 8,641 15 |
| Balance to successors | | | $799 43 |

| | | |
|---|---|---|
| 1914 — Balance from predecessors | $799 43 | |
| Subscriptions and interest | 6,502 62 | |
| | | $7,302 05 |
| Disbursements | | 7,292 56 |
| Balance to successors | | $9 49 |
| 1915 — Balance from predecessors | $9 49 | |
| Subscriptions and interest | 3,914 01 | |
| | | $3,923 50 |
| Disbursements | | 3,157 05 |
| Balance to successors | | $766 45 |
| 1916 — Balance from predecessors | $766 45 | |
| Subscriptions and interest | 12,765 86 | |
| | | $13,532 31 |
| Disbursements | | 13,696 02 |
| Deficit to successors | | $163 71 |
| 1917 — Subscriptions and interest | | $10,912 50 |
| Disbursements, including 1916 deficit | | 9,615 65 |
| Balance to successors | | $1,296 85 |

In addition to the foregoing large sums were raised for local celebrations and did not pass through the treasury of the Mayor's Committee.

### Results of the Celebration

The beneficent results of the efforts to promote a rational celebration of Independence Day are indicated by the statistics published in the Journal of the American Medical Association of August 26, 1916, which may be summarized as follows.* The figures include returns from all of the United States:

| Year | Killed | Injured | Total |
|---|---|---|---|
| 1903 | 466 | 3,983 | 4,449 |
| 1904 | 183 | 3,986 | 4,169 |
| 1905 | 182 | 4,994 | 5,176 |

* The editors of the Journal of the American Medical Association did not collect statistics of Fourth of July casualties in 1917, as the beneficial effects of the "safe and sane" celebrations had been sufficiently demonstrated.

| Year | Killed | Injured | Total |
|---|---|---|---|
| 1906 | 158 | 5,308 | 5,466 |
| 1907 | 164 | 4,249 | 4,413 |
| 1908 | 163 | 5,460 | 5,623 |
| 1909 | 215 | 5,092 | 5,307 |
| 1910 | 131 | 2,792 | 2,923 |
| 1911 | 57 | 1,546 | 1,603 |
| 1912 | 41 | 947 | 988 |
| 1913 | 32 | 1,131 | 1,163 |
| 1914 | 40 | 1,466 | 1,506 |
| 1915 | 30 | 1,135 | 1,165 |
| 1916 | 30 | 820 | 850 |

The figures given by the same authority for New York City for the past eleven years are as follows:

| Year | Killed | Injured | Total |
|---|---|---|---|
| 1907 | 22 | 422 | 444 |
| 1908 | 11 | 316 | 327 |
| 1909 | 7 | 559 | 566 |
| 1910 | 6 | 179 | 185 |
| 1911 | 3 | 91 | 94 |
| 1912 | 1 | 58 | 59 |
| 1913 | 0 | 65 | 65 |
| 1914 | 1 | 94 | 95 |
| 1915 | 0 | 272 | 272 |
| 1916 | 1 | 79 | 80 |

### City Hall Exercises

The exercises at the City Hall at 10 a. m. were jointly under the auspices of the Mayor's Committees, of which Hon. George Gordon Battle was Chairman, and the American Scenic and Historic Preservation Society, of which Dr. George Frederick Kunz is President. The City Hall Committee consisted of

Dr. George F. Kunz, Chairman

| | |
|---|---|
| Miss Josephine Beiderhase | Dr. E. Hagaman Hall |
| Barnett Braslow | Mrs. Axel O. Ihlseng |
| William K. Brice | Miss Olga Ihlseng |
| Miss Elizabeth Burchenal | William A. Johnston |
| Miss Laura Sedgwick Collins | Miss Caroline Lewis |
| Joseph L. Delafield | Miss Elizabeth P. Murlless |
| Arthur Farwell | Miss Mary J. Pierson |

Delegations were present from the Holland Dames of New Netherlands, American Red Cross, United States Boy Scouts,

Old Guard, Committee for Greeks of Asia Minor, Society of the Mayflower Descendants, Daughters of the Revolution, British War Relief Society, Holland Society, Liberty Loan of America, and the Sons of the American Revolution.

The order of exercises was as follows:

Music: "America," The Public School Children led by Frank R. Rix, Director of Music in the Public Schools.
Address: Dr. George Frederick Kunz, introducing Hon. George Gordon Battle.
Address: Hon. George Gordon Battle, Chairman of the Mayor's Independence Day Committee.
Solo: "The Battle Hymn of the Republic," David Bispham.
Reading: The Declaration of Independence, Richard A. Purdy.
Music: "Swanee River," Public School Children.
Address: Hon. John Purroy Mitchel, Mayor of New York.
Music: "Star Spangled Banner," with Miss Harriet McConnell as Columbia.
Demonstration: Girl Scouts, Troops Nos. 1 and 5, of Brooklyn. Miss Caroline Lewis, Scout Directress.
Address: Hon. William A. Prendergast, Comptroller of the City of New York.
Exhibition: The Flags of our Country, Richard Cronin.
Music: "Columbia, the Gem of the Ocean," Public School Children.

As the keynote of the exercises on July 4, 1916, had been "Preparedness,"— a movement in which Mayor Mitchel had taken a lead — so, the keynote of the celebration of July 4, 1917, was the European war in which the United States had so recently entered.

### Patriotic Song Rallies

A notable feature of the celebrations conducted in other parts of the city under the auspices of the Mayor's Committee were the Patriotic Song Rallies under the direction of the Committee on Music consisting of

Prof. Henry T. Fleck, Chairman

| | |
|---|---|
| Louis Annin Ames | Charles C. Hughes |
| Albert Behning | E. C. Hunt |
| John J. Borgstede | William J. Lee |
| Miss Clara Byrnes | Dr. James J. McCabe |
| Edward Crane | Mrs. Ralph McKee |
| Dr. John Denbigh | J. Coll Price |

The plan of these song rallies was to get the people to sing. Programs were printed with the words of popular songs, such as "The Star Spangled Banner," "Tenting To-night," "Columbia, the Gem of the Ocean," "Swanee River," "My Old Kentucky Home," "Old Black Joe," "Hail, Columbia," "Battle Hymn of the Republic," "Dixie," and "America," and placed in the hands of the throngs at the various centres. The meetings were held in the public parks, some in the daytime and some in the evening. A band of music at each place played orchestral pieces and led the songs, and interspersed between the musical selections were speeches. The speakers included Hon. George Gordon Battle, Chairman of the Mayor's Committee; Hon. Newton D. Baker, Secretary of War; Borough Presidents Marcus M. Marks, Douglas Mathewson, and Lewis H. Pounds; Congressmen Murray Hulbert, Walter M. Chandler, and Oscar W. Swift; United States Senator William M. Calder, Mr. Louis O. Van Doren, Mr. Louis Annin Ames, Dr. John H. Denbigh, Hon. James Cropsey, Hon. Bird S. Coler, Dr. John Wesley Hill, Hon. Jos. J. Holwell, Mr. Philip J. McCook and Mr. William A. Johnston.

Many thousands of men, women and children participated in these rallies.

### Athletics and Playground Festivals

The athletic and playground festivals conducted by Mr. William J. Lee, Supervisor of Recreation of the Department of Parks, have always been a notable feature of the Independence Day Celebrations, and particularly successful in bringing the day home to the people. They had the honorary patronage of a distinguished committee of public officials, educators and leading citizens. The Executive Committee consisted of William J. Lee, Chairman; Frederick W. Rubien, Vice-Chairman; John J. McCormack, Secretary; and twenty others. The meetings were held at 38 playgrounds, and 6 public baths, in the different boroughs. No entry fee was charged for the athletic contests, and no admission was charged to the grounds. Prizes of various sorts were given to the successful competitors. It is estimated that 50,000 people witnessed or participated in these events alone.

### A New Declaration of Independence

A feature of the celebration at Washington's Headquarters, (the Jumel or Morris Mansion), in 160th street, was the concluding part of the address of Edward Hagaman Hall, L. H. D., which took the form of a new Declaration of Independence, as follows:

"When in the course of human events, it becomes necessary for one Nation to dissolve the ties of friendship which have bound it to another and to take up arms against a government with which it has been at peace, a decent respect for the opinion of mankind requires that the causes compelling to this unhappy issue should be declared before a candid world.

"One hundred and forty-one years ago, the Founders of this Republic declared the self-evident truths that all men are created equal, endowed by their Creator with the inalienable rights of life, liberty and the pursuit of happiness, subject only to government deriving its just powers from the consent of the governed.

"Inspired by those principles of human liberty, equal justice and democratic self-government, our Forefathers purchased the Independence of these United States with their blood and dedicated this Country forever to the free enjoyment not only of our own citizens but also of the people of every clime who might come to these shores.

"Recognizing and preferring peace as the normal and rightful condition of civilized life, and content in the quiet enjoyment of our priceless Liberty, we have consistently sought to avoid involvement in the affairs of foreign governments except such as is dictated by the common sentiments of human friendship and the intercourse of peaceful commerce. We have therefore never raised the sword except in self-defence or in the chivalrous championship of the oppressed.

"While the United States flourished in the midst of peace and prosperity born of these happy conditions, the Imperial German Government, without provocation on our part, began both openly and insidiously to make war upon us. It sank our ships pursuing their lawful errands upon the free seas; it murdered our men, women and children and made holiday over the crime; it endeavored to constrain the movements of our ocean travel within pent-up channels and to impose upon the vessels of our sovereign Nation the striped livery of slaves and felons. Within our own domain, while maintaining the false guise of friendship, it conspired to blow up our factories, kill our citizens and destroy our industries and commerce; it stirred up sedition in our midst; it plotted the inva-

sion of our territory; and planned the dismemberment of our Union. While it thus betrayed our confidence and made actual war upon us, it ignored our friendly remonstrances, derided the patience with which we bore these unspeakable wrongs, and construed as cowardice our endeavors by peaceful means to secure their abatement.

"These crimes, committed against us, are alone sufficient — were there no others — to demonstrate that the Imperial German Government has no regard for the rights of other Nations; that it is incapable of comprehending the spirit of a free democratic people and that it is beyond the persuasions of reason; and to force upon us the reluctant conclusion that its brutal aggressions can be checked only by force of arms.

"But beyond the seas we have evidence of the still greater calamities which the Imperial German Government will inflict upon us if it be not checked now in its ruthless career. Beginning by perfidiously breaking its sacred treaty with a weak but friendly nation, it has invaded friendly soil on all sides and sought to subject foreign nations to its domination. In the prosecution of its selfish ends, its armies have destroyed unoffending towns; demolished their most holy shrines; laid oppressive tribute upon unconsenting people to carry on war against them; murdered peaceful inhabitants; subjected women to brutal lust; led men, women and children into captivity; mutilated the bodies of living and dead; robbed the starving of food; and with purposed deliberation polluted the water of wells and destroyed the vegetation which might sustain life after its desolating legions had been expelled. Still further, in its operations by sea and air, it has made unrestricted war on friends, neutrals and foes alike; it has attacked unfortified towns remote from the scene of general conflict, and, in violation of the most elementary principles of civilization, has murdered babes, women and non-combatant men; sunk hospital ships on their errands of divine mercy; and shot drowning men.

"In its cruel aggressions, it has been first to introduce into modern warfare the most frightful means which perverted ingenuity could devise for prolonging the suffering of those who perchance might survive its destructive onslaughts.

"Under this indictment of barbarism and inhumanity, the Imperial German Government stands to-day at the bar of Civilization; and with the menace of its brutal tyranny, the United States of America and democratic government throughout the world are now threatened. In this crisis, there is but one course for a Nation of Freemen to pursue. Life is not so dear or peace so sweet as to be purchased at the price of slavery like this.

"We therefore not only reaffirm the principles of free government declared by our fathers for ourselves, but we also proclaim these in a larger sense to be the truths of universal humanity. We hold that all civilized nations, small and great, weak and strong, are equal in the right of life, liberty and the pursuit of happiness; equal in the right of self-government without foreign domination; equal in the right to work out their peaceful destinies without alien interference.

"The Imperial German Government having shown its determined purpose not to recognize these truths and not to observe these rights of other peoples, we denounce it as the enemy of civilization and humanity, and with confidence in the justice of our cause, join the issue which it has forced upon us.

"And for the assertion of this Declaration and the achievement of a righteous victory, we invoke the help of Divine Providence and mutually with our allies pledge our lives, our fortunes and our sacred honor."

### Exercises at the Stadium

The most elaborate of all the exercises of the day were those at the Stadium of the College of the City of New York in the evening. They were under the joint auspices of the Mayor's Committee and the American Scenic and Historic Preservation Society, and the immediate direction of the following committee:

George F. Kunz, Ph. D., Sc. D., Chairman

| | |
|---|---|
| Miss Josephine Beiderhase | Charles C. Hughes |
| Barnett Braslow | Mrs. Axel O. Ihlseng |
| W. K. Brice | Miss Olga Ihlseng |
| Lewis K. Brown | William A. Johnston |
| Miss Elizabeth Burchenal | William J. Lee |
| Miss Laura Sedgwick Collins | Miss Caroline Lewis |
| Joseph L. Delafield | Miss Elizabeth Murlless |
| Arthur Farwell | Miss Mary J. Pierson |
| Dr. E. Hagaman Hall | J. Coll Price |

An audience estimated to number 25,000 persons was present.

The exercises began at 8 p. m. with the singing of "America" by the New York Community Chorus, directed by Mr. Harry Barnhart, and the people.

Dr. Kunz then introduced Hon. George Gordon Battle, both making short addresses.

"Paul Revere's Ride" was enacted by Mr. John Joseph Breen, and the Boy Scouts of America.

The next speaker was Red Fox Skiu-hu-shu, a full-blooded Blackfoot Indian. Red Fox had recently ridden on his pony to 26 state capitals to ask the Governors to establish June 2 as Indian Day. He spoke in the Stadium by arrangement with the American Indian Monument Association. He said:

"Mr. Chairman, I cannot say Fellow Citizens, for although I am an American, I am not a citizen. I am simply an Indian, but because I am an Indian, I am the First American.

"You have seen tonight the ride of Paul Revere and heard his call, To Arms! and I have seen twenty nations here tonight fall into line. And now this great nation has heard the call of President Wilson to join the fighting hosts. My own people, the North American Indian, has heard the call to arms, but you will not let us answer the call. Are we to be discriminated against? Do you not need us in this terrible conflict? Are we to remain inactive, when fifty thousand Indians are ready to serve as cavalry regiments. From all over the West we stand ready to spring to the saddle. We stand ready to protect the fourteen hundred miles of border between the United States and Mexico. Fifty thousand men who know a horse as no white man ever knew it; fifty thousand Indians who can live where no white man has ever lived; fifty thousand Indians who, when their hearts are in a cause, as our hearts are in this cause, would die for it as no other nation.

"Mr. Secretary of War, call us to arms! let us guard and fight for our country. We promise you that not an alien foot shall ever cross the southern border to pillage or destroy. We beg of you to give us the chance to fight, to fight as a body of our own people. And then we pray you give to us what you have given to every other people who have come to these shores, the right to citizenship, a right which is our birthright. My people were Americans before the kings and emperors were born who reigned over the countries from which your forefathers came. Mr. Secretary, give us the chance to fight, and then make us a part of the country for which we fight."

"The Spirit of 76" was enacted by Louis Rauschkolb as fifer, and Fred Rauschkolb and Edward Morris as drummers.

"Margaret Corbin" at the defense of Fort Tryon on November 16, 1776, was enacted by Miss Laura Sedgwick Collins, Mr. Robert Corbin and Mr. E. B. Childs.

Mr. Harry Barnhart sang "The Recessional" as a solo.

The American Red Cross gave a demonstration of ambulance service and kitchen service.

"Woman Suffrage" was presented in tableau under direction of Miss Henrietta Crossman and Mrs. John Blair. "Columbia" was impersonated by Mrs. Robert Cummings, "Suffrage" by Miss Charlotte Tittle, and "Justice" by Miss Alma Chester. The action represented Suffrage, shackled, imploring Columbia for freedom and summoning to her aid various groups of women who serve their country in time of war and peace. Among the groups so summoned were the women doctors, directed by Mrs. Charles L. Tiffany; the Woodcraft girls directed by Mrs. Ernest Thompson; the war nurses directed by Miss Charlotte Delafield and Mrs. Owen Davis; the agricultural group directed by Ethel Watts Mumford Grant, and Helena Smith Dayton; classical group directed by Miss Amy Grant, the cavalry group of the American Woman's League for Self Defense; the labor group, and Mrs. Norman de L. Whitehouse, chairman New York State Woman Suffrage Party. At the close of the tableau, Justice awakened Columbia to the fact of her duty toward her women, and the shackles were stricken from the hands of Suffrage. Under the American flag, the liberated women joined in a joyous cry of freedom.

The remainder of the program was as follows:

Music: "Dixie." Community Chorus and Audience.
Address: Hon. Newton D. Baker, Secretary of War.
Demonstration: League of Foreign Born Citizens.
Address: Nathaniel Phillips, President of the League of Foreign Born Citizens.
Exhibition: The Flags of our Country. Richard Cronin.
Music: "Columbia, the Gem of the Ocean." Community Chorus and Audience.
Address: Hon. John J. Fitzgerald, M. C.
Demonstration: Hon. G. Murray Hulbert, M. C.
Demonstration: A Company of Blue Jackets, U. S. N., and a company of the 12th Infantry, U. S. A.
Song: "The Star Spangled Banner." Madam Eleanora de Cisneros of the Metropolitan Opera Company.

### Secretary of War Baker's Speech

Secretary of War Baker's speech at the Stadium was as follows:

"In 1776, on the fourth of July, a nation was born, dedicated to a new theory of government and a new ideal of human liberty. On the Fourth of July, 1917, our newspapers announce through-

out a vast and populous continent, to a people who for more than 100 years have known political liberty, and with it unexampled progress, that an expeditionary force of their soldiers had landed, without the loss of a man, on the soil of France to defend in that place the great principles of democracy and liberty under which they have lived so long.

" In passing, it will be deemed appropriate for me to pay in public, as I did by letter to the Secretary of the Navy, the tribute of thanks from the army to the navy for the superb way in which they acquitted themselves of the grave responsibility of that convoy.

" And I think I can say to the American people that the splendid co-operation between the army and the navy which characterized this first martial exploit is a promise of a happy and effective co-operation in the future. So that we can look forward to the American Army and Navy, the two strong arms of the American people, on many glorious fields and many glorious seas sustaining the traditions of our country and establishing forever the belief that freemen in a battle for freedom fear no foe.

" I want to appeal to all Americans, never during the progress of this war let us for one instant forget the high and holy mission with which we entered it, no matter what the cost, no matter what the temptation. Let us bring out of this war the flag of our country as untarnished as it goes in, sanctified and consecrated in the establishment of liberty for all men who dwell on the face of the earth.

" Things have come to a pass in this world where all mankind must choose whether the nations of the earth are to be autocratic in their government and militaristic in their pretensions, or democratic in their government and just in their pretensions.

" America has chosen — nay, she chose in 1776 — that she intended to be democratic in her politics and in her government, and our whole history of more than one hundred years justifies the statement that our people are wedded and devoted to the idea of international justice as the rule upon which nations shall live together in peace and amity upon the earth.

" And now let me take your time just for a moment to tell you something of our preparation. As you know, the Congress of the United States has ordained that we shall undertake extensive military preparation.

Secretary Baker reviewed what has been done by way of recruiting the regular army and the National Guard and toward raising the new forces by selective draft. In that connection he said:

" There will be preserved that just pride which the people of our several States have in their own soldier boys, so that the soldier

from New York will be known as a part of the contribution of this great commonwealth to our national strength, and the soldier from Wisconsin and from Ohio, and from Texas equally designated, but in the eyes of the country in all that is done for them and in all that they do for us there is to be neither distinction nor prejudice nor favoritism, but they stand equal as the servants and as the upholders of our liberties.

"And this great company of men are to be trained to meet modern conditions of war. They are to be equipped with the most modern and effective devices, both for aggression upon our adversary and the protection to our own men. And I want to say to the mothers and fathers, to the wives and sisters of American soldiers, that the Congress has provided the money and the expert minds of this country are providing the experience and the knowledge, and every effort is making and is to be made to protect our soldiers against any possible loss or sacrifice that can be avoided in this great undertaking.

"Modern times have witnessed many new things. The great science of medicine and sanitation has wonderfully advanced, and all the safeguards that knowledge and science can throw around our soldiers are to be placed about them. And in these great encampments, where they are to be trained, modern recreation experts are to provide wholesome and attractive amusements for their leisure, so that when they come out of the army they will have no scars except those honorably won in warfare against the enemy of their country.

"This is truly a great undertaking worthy of a great people, for modern war is no longer a conflict of a selected few who represent the nation, but it is really the era of nation against nation, and, while some of us are at the front in battle or up in the clouds fighting with air craft or in some one of the other places of military activity, there is an obligation on every one of us who stay at home to do our part as faithfully as the soldiers are called upon to do theirs at the front.

"The mere business of this enterprise is very great. Perhaps I can give some idea to you of what it means if I quote for your information a few comparative figures.

"Take, for instance, the subject of aeronautics. In 1915 the Congress appropriated something less than $500,000 for the building of air craft in the army. In 1917 the appropriation was $47,000,000, and now Congress is considering a bill which appropriates the great sum of $639,000,000 for the building of aeroplanes.

"Under normal circumstances the appropriation made by Congress for our army's regular supplies is about $10,000,000, and

this year for war the first appropriation is $110,000,000. In the item of transportation for the army, instead of the peace time appropriation of some $13,000,000 or $14,000,000, Congress has already appropriated $222,000,000. For clothing and such items, instead of the ordinary appropriation of $6,500,000, Congress has appropriated more than $200,000,000.

"Take the item of supplies. We must buy now for the armies that we are training and sending abroad 5,000,000 blankets, 37,000,000 yards of bobinettes, 45,000,000 yards of cotton cloth, 21,000,000 yards of unbleached drilling — nay, we have to go to every factory and workshop in this country and start its wheels spinning in order that these unprecedented quantities of our supplies may be available for our armies.

"And then we must rear in the United States sixteen cities within the incredibly short space of time of three months. They are to be built of wood, and each of these sixteen cities is to house 40,000 men, not only with places of shelter but with places for their cooking, hospitals and all of the buildings that ordinarily go with a city. And I tell you these things not to magnify the size of the task but to illustrate to you the way in which our progress is being made, for I can tell you that, although all these things are unprecedented in size and quantity, American industry is so rapidly responding that they are being furnished and will be supplied on time.

"And the program is that American skill and ingenuity, American scientific knowledge and the skill of handicraftsman, of inexhaustible resources of supplies, shall all be drawn upon and we shall contribute, with those with whom we are associated in this war abroad, to the unquestionable supremacy of the air. So that our army will have eyes that can see and be able to ferret out our adversary and enemy and save the military operations of those who depend upon the airmen for their knowledge of the enemy's disposition.

"I want to conclude this Fourth of July address with one particular thought. We must look to the end of this great business. We at home must fight for democracy here as well as our armies for it abroad. In the midst of our military enterprises we must be equally loyal to our own political theories here. All this vast reorganization of industry must be made without the loss of the great physical and social gains which we have achieved in the last hundred years, mostly years of peace and fruitful effort and toil.

"We must not allow the hours and conditions of people who work in factories and workshops to be upset and interfered with. We must preserve the sweetness of our rights. We must agree in deeds of grace here, as our soldiers do deeds of grace on the other

side, for I can see the day when this harbor of yours will be filled with the mass of ships returning from abroad and bringing back our soldiers. They will come, it may be, with their ranks somewhat thinned by sacrifice, but with themselves glorified by accomplishment, and when those heroes step off the boats and come ashore and tell us that they have won the fight for democracy in Europe, we must be able to tell them in return that we have kept the faith of democracy at home and won battles here for that cause while they were fighting there."

## LAFAYETTE DAY

### Anniversary of the Battle of Marne

On Thursday, September 6, 1917, Lafayette Day was celebrated for a third time in New York City with elaborate exercises. The coincidence of the anniversaries of the date of Lafayette's birth and the battle of Marne in 1914 gave special significance to the event, and the entrance of the United States into the war since the celebration of Lafayette Day in 1916* gave increased meaning to all that was said and done, for as Lafayette had come to America to help the United States to win their independence, so now the United States had sent its own generals to France to help France maintain hers.

The principal officers of the Citizens Committee in charge of the celebration were as follows:

Honorary Presidents: Theodore Roosevelt, Elihu Root and James Stillman.
Chairman: Willard Bartlett.
Honorary Secretary: Maurice Leon.
Treasurer: William Redmond Cross.
Executive Committee: Frank A. Vanderlip, Chairman; Maurice Leon, Vice-Chairman.
Arrangements Committee: George T. Wilson, Chairman; George W. Burleigh, Vice-Chairman.
Committee on Decorations of Buildings and Monuments: William A. Coffin, Chairman; William B. Van Ingen, Vice-Chairman.
Committee in charge of Exercises at Lafayette Monument, Union Square, New York: Lawrence F. Abbott, Chairman; Edward Harding, Vice-Chairman.

* For a full account of the celebration in 1916, see our last Annual Report.

Ladies' Section of Committee: Mrs. Atherdon, Chairman; Mrs. Frank A. Vanderlip, Vice-Chairman.
Reception Committee: William D. Guthrie, Chairman; John Jay Chapman, Vice-Chairman.
Finance Committee: August Belmont, Chairman; Samuel McRoberts, Vice-Chairman.
Committee in charge of Exercises at Lafayette Memorial, Prospect Park, Brooklyn: Lewis H. Pounds, Chairman; Frederick Boyd Stevenson, Vice-Chairman.

The guests of honor from foreign governments were:

*France:* Andre Tardieu, High Commissioner of the French Republic; Henri Franklin Bouillon, member of the French Chamber of Deputies; Colonel Claudon of the French General Staff; Lieutenant Legastellois, Commander de Blanpre, Gaston Liebert, Consul General of France; Mr. Nettement, Consul of France; S. D. Halewyn, Vice Consul of France; Lieutenant de Chevigne, Lieutenant de Latouche, and Daniel Blumenthal, former Mayor of Colmar, Alsace.

*Belgium:* Lieutenant General Leclercq and Major Osterreith of the Belgian Military Mission.

*Great Britain:* Commander Arthur T. Blackwood, R. N.; Lieut. Col. B. Rees, V. C., Royal Flying Corps, and Lieut. Col. Campbell Stuart of the Canadian Army.

*Italy:* General Tozzi, Colonel Bindo Binda, Lieutenant Mario Pasquali, Lieutenant Elmo de Paoli, Lieutenant Giuseppe Coppola, and Lieutenant Ugo Spinola of the Italian Military Mission.

*Russia:* Colonel V. V. Oranovsky, Captain V. M. Zaikovsky, and Lieutenant N. N. Smirnoff of the Russian Military Mission.

The guests of honor assembled in the building of the Bar Association of New York at 42 West 44th street, where they were received by a committee headed by William D. Guthrie, and including Brig. Gen. Eli D. Hoyle, commanding the Department of the East; Colonel William A. Simpson, U. S. A.; Rear Admiral Nathaniel R. Usher, commanding the Brooklyn Navy Yard, and Lieut. Commander John W. Wilcox, Jr., U. S. N. Then, in fifteen automobiles and preceded by a squad of motor cycle police, they drove to the City Hall, pausing at the Lafayette Statue in Union Square, where Mr. Guthrie laid a wreath on the monument, while a battalion of Wanamaker's girl cadets stood with rifles at present arms.

The City Hall exercises began at 3 p. m. The old Lafayette guards, under Captain Arthur Blum, with the flags of America and France, formed a guard of honor, with Jeannette Blum, the Captain's daughter, in zouave uniform, and Anna Merceron, in the costume of the Alpine Chasseurs, standing as sentinels at the head of the line in front of the dais in the Aldermanic Chamber.

Former Judge Willard Bartlett presided. The other speakers were: Mayor Mitchel, Dr. Henry Van Dyke, Dr. John H. Finley, and Captain Tardieu.

Vice-Chairman Maurice Leon read messages from President Poincare of France, Marshal Joffre, French Ambassador Jules J. Jusserand, Major Gen. John J. Pershing, American Ambassador William G. Sharp, Admiral Sir David Beatty, Commander Arthur T. Blackwood, R. N., Dr. Nicholas Murray Butler, and others.

In the evening, a brilliant dinner was given in the grand ballroom of the Waldorf-Astoria by the France-America Society. Mr. Frederic R. Coudert was toastmaster. The principal speakers were Ambassador Jusserand, Mayor Mitchel, Mr. Frederick Cunliffe-Owen, and Monsieur Henri Franklin Bouillon, President of the French Radical party. Messages from leading French statesmen were read. Intense enthusiasm characterized the meeting.

## CATSKILL AQUEDUCT CELEBRATION

### Impressive Ceremonies in New York

The celebration of the completion of the Catskill aqueduct which was held in New York City in 1917 was one of the most significant and intrinsically important in the city's civic history. Only the existence of the war prevented it from being outwardly one of the most brilliant celebrations in the long list of great commemorations held in the metropolis. As it was, it was notable. The City Hall exercises were dignified and impressive. The inauguration of the jet fountain in Central Park was symbolical and beautiful. The pageant would have been a brilliant success but for the interruption by the rain. The official dinner, with the award of medals, was a civic and scientific event. The medal itself was a triumph of medallic art. The music festivals in the five boroughs were artistic achievements and united various nationalities in a common

interest. The moving pictures shown at the City Hall, at the official dinner and elsewhere, and the school exhibitions of photographs, both furnished by the committee; the writing of competitive essays in 600 public schools for medals awarded by the committee; the distribution of thousands of historical pamphlets; the special religious services in the churches; the series of remarkable art, scientific and historical exhibits by thirty-five leading institutions of the city, covering a period of several months; and the splendid cooperation of the press, brought the significance of the event home to our own people of all ages and classes and published it to the world. The plans for the treatment of the old reservoir in Central Park will be developed and formally submitted to the City authorities in due time.

The Mayor's Committee which had the commemoration in charge was congratulated for having conducted a celebration so successful at such a difficult time.

The American Scenic and Historic Preservation Society having been asked to act as official historian of the celebration, we have devoted Appendix E to a history of the Catskill aqueduct and earlier water-supplies of New York, and to an account of the celebration.

## NEW YORK CITY MILE-STONES

### The Post Road Mile-stones on Manhattan Island

The ceremonies under the auspices of the City History Club of New York in 1917 at the dedication of two of the many mile-stones under its protection have caused us to examine into the original location of several of these interesting landmarks. Indeed, they are more than interesting; they are instructive, and the knowledge of their original locations important, for there are many references to mile-stones in old conveyances of real estate and in documents relating to military movements in the Revolutionary period which, otherwise obscure, become readily intelligible when the original locations of the mile-stones are known.

The present inquiry refers only to the mile-stones, fourteen in number, which were set to mark the distances along the old Post road route from the City Hall which stood at Wall and Nassau streets to King's Bridge. The route led west through Wall street

to Broadway, thence up Broadway, Park Row, the Bowery, and so on as indicated by the locations hereafter given.

We have no record at hand showing when these mile-stones were first established; but on September 6, 1769, the Common Council authorized the payment to George Lindsay or order of "the Sum of £8:11:2 for 16 mile-stones by him furnished for the use of this Corporation."

After the opening of Third Avenue, and after the erection of the present City Hall, the location of many of the stones was changed. The distance between the site of the old City Hall and the present City Hall, measured by way of Wall street, Broadway and Park Row, is about 100 feet more than half a mile,* and the sites of the relocated stones were about that distance north of their former locations. There has been a common impression that the locations indicated on Randel's 1811 map were based on the position of the present City Hall, which was in use at that time but not yet finished. It appears from the present study, however, that Randel's locations were based on the old City Hall as the starting point.†

*First Mile-stone*

The first mile-stone was on the Bowery between Chatham square and Canal street. Measuring back one mile from the second mile-stone, whose location at Astor place is well authenticated, the first mile-stone should have been just south of Canal street. Christopher Colles' road map (1789) shows it just north of Chatham square. At some time not known the stone was moved northward to Rivington street. If we measure back from Rivington street a distance equal to the distance between the two City Halls, we

* The exact distance depends on the points chosen for measurement, a choice in which there is some room for differing opinions.

† The survey for Randel's map was practically completed by November 29, 1810. (See Common Council minutes of December 3, 1810.) The work was completed before April 3, 1811, and on April 22 the Commissioners reported to the Common Council that the maps had been filed as required by law. The City Hall was not occupied by the city government until August 12, 1811. (See minutes of July 15, August 5 and August 12, 1811.) Even then, the City Hall was not finished. With respect to the relocation of mile-stones in Third avenue, the opening of that avenue was recommended May 20, 1811; and legal measures were authorized August 17, 1812. (See minutes of those dates.)

approximate the location indicated on Colles' map, in the vicinity of Pell street. The famous Bull's Head tavern, which stood on the west side of the Bowery about midway between Bayard and Canal streets, was sometimes referred to as "near the first mile-stone;" but contemporaneous mention of "nearness" to mile-stones must be received with caution. There were various degrees of proximity to these landmarks, as is amply attested by reference to old deeds.

*Second Mile-stone*

The second mile-stone was at Fourth avenue and Astor place. This is proven by the Common Council minutes of April 10, 1797, which refer to the road "leading from the Bowery Lane at the two Mile-Stone to Greenwich." This road was the Sand Hill road, later called Art street, which at this point corresponded to the present Astor place. The location of the stone is clearly shown on the British Headquarters map (1782). It is also located there on Colles' road map (1789). This stone was subsequently moved to Third avenue between 16th and 17th streets. The time of the removal of this and other mile-stones may be disclosed after an examination of the post-Revolutionary Common Council minutes now in course of publication. The removal evidently had some connection with the opening of Third avenue, as the fourth and fifth mile-stones were also placed on Third avenue.

*Third Mile-stone*

The third mile-stone was at 26th street just east of Madison avenue. This is determined by measuring a mile along the line of the old Post road from the second mile-stone and is confirmed by the British Headquarters map of 1782 which shows it about 1,000 feet northeast of the southwest corner of what is now Madison Square, where the Eastern Post road branched off from the Bloomingdale road. Colles' road map (1789) shows it located at the same place.

*Fourth Mile-stone*

The fourth mile-stone appears to have been at the time of the Revolution at 45th street about 200 feet east of Third avenue, on a part of the Post road not usually indicated in delineations of that

old thoroughfare. The British Headquarters map of 1782 shows the Post road crossing the confluence of streams which we know met in the middle of the block bounded by 42d street, 43d street, Third avenue and Lexington avenue. Just beyond the bridge over this stream the road forked and for a distance of 1,200 or 1,300 feet there were two roads, which came together again. The Headquarters map shows the four-mile stone about 850 or 900 feet from the bridge, on the eastern of the two roads, which would bring it at 45th street about 200 feet east of Third avenue. Colles' road map also shows it about 800 feet beyond the bridge. The location at 45th street harmonizes with the requirement of a mile's distance from the third mile-stone at 26th street, but appears to be a block out of the way measuring back from the fifth mile-stone which we have located at 62d street and Second avenue. The latter measurement puts it just north of 44th street and west of Third avenue. We are inclined to think the 45th street site more accurate for the original location, and that the apparent scantiness of measurement is not real, as the road between the fourth and fifth mile-stones was particularly crooked. The fourth mile-stone was relocated at Third avenue and 57th street, two miles north of the relocated second mile-stone.

### *Fifth Mile-stone*

The fifth mile-stone was at Second avenue and 62d street, or a few feet north of that point. The location at 62d street is given by measuring back one mile from the location of the sixth mile-stone shown on Randel's 1811 map. On that map an old farm road leaves the Post road between 62d and 63d streets and runs southeastward to the river. On the British Headquarter's map, the fifth mile-stone is located opposite the junction of that farm road with the Post road. The Dove tavern, called Adamson's on Colles' map, was 600 feet or more north of the stone. Prof. Johnston, in his Battle of Harlem Heights, puts the Dove tavern at 66th street.

On February 13, 1788, the Common Council leased to George Adamson "a Piece of Ground theretofore possessed by Alexr McAuley at the five Mile-stone." In the Common Council minutes of April 24, 1797, is a record of the refusal to sell Jacob

Morton "two lots at the Dove tavern near the 5th mile-stone." The fifth mile-stone was relocated on Third avenue at 77th street, three miles from the relocated second mile-stone.

*Sixth Mile-stone*

The sixth mile-stone was at Third avenue and 81st street. This is indicated on the map of 1811 made by John Randel for the commissioners under the law of 1807. As this location ties in with the previous locations based on data prior to the building of the present City Hall, it is apparent that the locations of mile-stones on Randel's map represent measurements from the Wall street City Hall.

*Seventh Mile-stone*

The seventh mile-stone was just north of the line of 97th street and just west of Fifth avenue in what is now Central Park. The authority is Randel's map (1811). A curious feature of the map at this point is the location of a 7½ mile-stone on the line of 96th street just west of Fifth avenue. As the Bloomingdale Cross-road joined the Post road at this point, the significance of the 7½ mile-stone is apparently related to the distance via the Bloomingdale road.

On May 14, 1790, the Common Council accepted the proposal of Henry Shute to keep in repair certain roads, including "the Bloomingdale road from the junction thereof with the Post road* round by Mr. Apthorpe's to the seven Mile-stone on the Post Road." In other words, the contract included the care of the Bloomingdale Cross-road.

*Eighth Mile-stone*

The eighth mile-stone was at Seventh avenue just north of 115th street, where St. Nicholas avenue crosses. The authority is Randel's 1811 map.

*Ninth Mile-stone*

The ninth mile-stone was in St. Nicholas avenue just north of 133d street. The authority is Randel's 1811 map.

According to the City History Club, the ninth mile-stone, the only one bearing the date 1769, stands in the private garden of

* At the present Broadway and 23d street.

Capt. Steer's residence, No. 473 West 152d street, between St. Nicholas and Amsterdam avenues. This would be near the site of the original tenth mile-stone (q. v.).

*Tenth Mile-stone*

The tenth mile-stone was on St. Nicholas avenue on the north side of West 153d street. The authorities are Randel's 1811 map and a precise note as to its position in his 1820 atlas. This location is confirmed by Christopher Colles' road map (1789) which shows it to be a short distance north of the house marked "Watkins." The Watkins house, shown on Colles' map on the west side of the road, then belonged to John Watkins, who had bought the neighboring farm of Gerrit Dyckman. The Dyckman house, a substantial stone building, was standing on the west side of the King's Bridge road at 152d street as late as 1881. (See Riker's History of Harlem, p. 550.) This stone was found in use as the top stone of a flight of cellar steps at No. 561 West 168th street and is now standing in the front yard at that place.

*Eleventh Mile-stone*

The eleventh mile-stone was on Broadway between 170th and 171st street. This location is arrived at by measuring the distance on Randel's 1811 map from the Jumel mansion to the eleventh mile-stone as indicated on that map, and then laying off the same distance in a modern street map. This stone is now preserved in Roger Morris Park in the rear of the Morris or Jumel mansion. The inscription on the tablet stating that in 1769 it stood at 156th street appears to be erroneous in the light of the present investigation.

*Twelfth Mile-stone*

The twelfth mile-stone was on Broadway at or just south of the present 190th street. The stone is indicated on Randel's 1811 map. Its location with reference to modern landmarks is ascertained by measuring forward a mile from the location of the eleventh mile-stone; also by measuring backward 1,100 feet from the brook which passes under Broadway in a hidden culvert where Bennett avenue and Nagle avenue come into Broadway. This

brook, shown on Randel's map, is a well-known landmark. The stone is now set into the wall of the entrance to the Isham property, at Broadway and 211th street, far from its original site.

*Thirteenth Mile-stone*

The thirteenth mile-stone appears to have had two locations at different times, one east of Broadway between Academy and 204th street and one at Broadway and 204th street. The early road to Kings Bridge turned from the present line of Broadway toward the Harlem river between Academy and 204th streets, and the British Headquarters map of 1782 shows the mile-stone a short distance beyond the turn. On Randel's 1811 map it is located just south of the Dyckman house, which is still standing on the northwest corner of Broadway and 204th street. The stone appears to have been moved after the Revolution, when the shorter road to Kings Bridge became more popular.

*Fourteenth Mile-stone*

The fourteenth mile-stone is indicated on Randel's 1811 map at a point corresponding to Broadway just north of the Harlem ship canal. On the British Headquarters map it is exactly at the narrow neck across which the canal was cut. As it is only 4,020 feet along the present Broadway from 204th street to the center of the canal, a mile from 204th street along the same line would just about reach what was Spuyten Duyvil creek — a point considerably beyond the indicated location of the mile-stone. It is apparent, therefore, that the mile between the 13th and 14th mile-stones followed the more circuitous route of the old Post road around to the east along Harlem river. But on Christopher Colles' road map of 1789 it is shown north of Hyatt's tavern.

**New Utrecht Mile-stone**

The first of the two mile-stone ceremonies of the City History Club in 1917 was the one on Saturday, May 12, when the old stone in front of the Van Pelt manor-house at New Utrecht, Brooklyn, was dedicated. The stone stands in the little park on the east side of 18th avenue between 81st and 82d streets. The Van Pelt house stands on the northeast corner of 18th avenue

and 81st street, with the piazza facing the mile-stone. The mile-stone and park were given to the city by Mr. and Mrs. Townsend Cortelyou Van Pelt. The mile-stone is a square stone post. (See plate 38.) On one face is the following inscription:

10½
mile to
N. York
Ferry
This Road
☞
To Jamaica
15
Mile
☞

On another face is this inscription:

8¼
Mile to
N. York
Ferry
This road
☜
To Denys's
Ferry
2½ Mile
☜

Members of the Kings County Historical Society acted as Color Guard on the occasion, and there was present a large gathering, including members of the City History Club and the New Utrecht Liberty Pole Association, and public school children.

Mr. Reginald Pelham Bolton, representing Mrs. Emil L. Boas, Chairman of the Mile-stone Committee of the City History Club, presided. The program was as follows:

Address: Mrs. A. Barton Hepburn, President of the City History Club.

Address: Edward Hagaman Hall, L. H. D., Secretary of the American Scenic and Historic Preservation Society.

Singing: "The Song of New York." City History Clubs and school children.

Address: "Historic New Utrecht." Charles A. Ditmas, President of the King's County Historical Society.

Address: "The Van Pelt Homestead and the Liberty Pole." John F. Berry, President of the New Utrecht Liberty Pole Association.
Presentation of the Mile-stone: Reginald Pelham Bolton, for Mrs. Emil L. Boas.
Unveiling of the Mile-stone: Miss Gertrude Covert Van Brunt.
Presentation of Deed for land of park: Jeremiah R. Van Brunt.
Acceptance of Park: Hon. Raymond V. Ingersoll, Commissioner of Parks.
Address: Hon. Lewis H. Pounds, Borough President.
Essay: "Local Landmarks of New Utrecht." Rudolph L. Weissman, of the New Utrecht High School.
Address: "The Protection of the Mile-stone." Irving A. Hazen, Principal of the New Utrecht High School.
Singing: "My City, 'Tis of Thee." Clubs and School children.
Singing: "America." The audience.
Salute to the Flag.

### Seventh Mile-stone Dedicated

The seventh mile-stone (Manhattan) was dedicated by the City History Club in the little enclosure at St. Nicholas avenue and 117th street called Kilpatrick Park, on Saturday morning, May 30, 1917. The stone has been set within a couple of blocks of the site of the original eighth mile-stone (q. v.). No pretence has been made that this is the original site of the stone. As before stated, the seventh mile-stone was originally located on the Post road in what is now Central Park, just west of Fifth avenue, on the line of 97th street. At an unknown date it appears to have been moved to some point on St. Nicholas avenue (formerly Harlem Lane) below 114th street. Its recent history, according to a memorandum of the City History Club, is as follows:

"At the time Seventh avenue was widened, the Contractor took up the stone, and was going to send it to the scrap heap. The Misses Wood had it removed to their yard, where it remained until that property was sold; then Mrs. Randell, a sister of Miss Wood, brought the stone to the house at 107 West 122d street. Mrs. Randell was attached to the stone because it had been by her father's property. No one seemed to care for it. She thinks the stone stood about 114th street or perhaps a little south of it on Harlem Lane. Mrs. B. W. Bedell is a niece of the above named ladies and has given us the information about the stone. Mrs. Randell has since died. When she sold the house and moved away

the stone was forgotten. Mr. Nissinson owns the house now and has given the stone back to the City's keeping."

Dr. Edward Hagaman Hall presided at the dedication exercises for Mrs. Emil L. Boas, Chairman of the Mile-stone Committee. The program was as follows:

Salute to the Flag: Color Guard of Public School No. 10 and children of City History Clubs and public schools.
Singing: "The Star Spangled Banner." Children and audience.
Invocation: Rev. George S. Pratt, D. D., of All Souls Church.
Address: Mrs. A. Barton Hepburn, President of the City History Club.
Address: "Our Mile-stones." Dr. Edward Hagaman Hall.
Presentation of Mile-stone: Reginald Pelham Bolton.
Unveiling of Mile-stone: Members of clubs and public school children.
Acceptance of Mile-stone: Lieut. William H. Shelton, for Park Commissioner Cabot Ward.
Address: "The Protection of our Mile-stones." E. E. Giltner, Department of History, New York Training School for Teachers.
Announcements: Dr. Frank B. Kelley, Superintendent of the City History Club.
Singing: "America." The audience.

## NEW YORK'S LAST HORSE-CAR

### Withdrawal Ceremonies July 26, 1917

The withdrawal of the last horse-car from use in Manhattan borough, New York City, in 1917, was a small but significant index of the city's progress. The dates of the "first" and the "last" of any of a city's great municipal institutions are usually of historic importance; and in that category may be included the dates of the first stage-coach, the first horse-car, the first cable-car, the first electric-car,* and the first automobile. The displacement

* From the Public Service Commission and the New York Railways Company we learn the following dates: The first horse-car line commenced operation on Manhattan Island on November 29, 1832. It operated on the Bowery and Fourth avenue from Prince street to Harlem river. The first elevated railroad was constructed along Ninth avenue in 1867. The cable-car service on Broadway began on July 27, 1893. The first electric car to be operated on Manhattan Island by the conduit electric system was placed in service about July 1, 1895, according to the New York Railways Co., while the Public Service Commission says: "The underground electric cable was first inaugurated on the surface lines in 1894 and the present trolley system was developed in 1897."

of horse-power by electric and auto-motive propulsion has been one of the most extraordinary phenomena of modern city life. This displacement has become so nearly complete in New York City, except for heavy trucking purposes, that one may now go days without seeing a horse in certain parts of the city. How rapidly this displacement has taken place may be judged by the fact that the first central station for supplying electric power in New York City was established, as stated on page 157, only 35 years ago; and electric street cars, which antedate automobiles, are a still younger institution. It is also interesting to note that the withdrawal of the last horse-drawn street car in New York City occurred almost 400 years after the first introduction of horses into America. The first horses in America were those which Cortez landed at Vera Cruz in 1519. These wonderful beasts, performing the bidding of their masters, terrified the natives,* who at first thought the horse and rider were one animal. To-day, we are witnessing the gradual disappearance of the horse; and the time seems to be not far distant when we will be setting up stuffed horses in our museums, not because, like the stuffed horse of Gen. Sheridan in the museum of Governor's Island, or the horse of Wallenstein in the museum at Prague, the individual horses were famous, but because they will represent a disappearing species.

The last New York horse-car in regular service was withdrawn on Thursday, July 26, 1917, with some ceremony. It was operated on the line which was incorporated in 1864, and began on the west at Eleventh avenue and Fourteenth street, traversed Greenwich Village, passed through Crosby street, and finally reached Park Row and Fulton street. Part of the distance of many miles there was a double track, but mainly the track was single.

The horse-cars were kept running long after they ceased to be profitable. In these modern days, people would not waste time riding on a slow-going horse-car, but the New York Railways Co. had to keep a car running once a day to maintain the franchise. During 1916, the line carried only 3,576 passengers and

* Somewhat we imagine, as the first "tanks" terrified the Germans in the European War.

received only $178.80, while the cost was about $4,000 a year. During the first half of 1917, the earnings were only $103.60. On July 17, 1917, it earned only ten cents on the single trip which was made. The Public Service Commission therefore consented to the discontinuance, and on July 26, 1917, the event was distinguished by a number of prominent men who took a last ride on one of the horse-cars. Two cars were provided at Broadway and Bleecker street for the final ceremonies, but only one was needed as the party all crowded into the first car. Among them were Manager Frank Hedley of the Interboro Rapid Transit Co., Public Service Commissioners Travis H. Whitney and Charles Hervey, Secretary James B. Walker and Assistant Secretary Daggett of the Public Service Commission. The driver of the car was James Cusick, who had been in the company's employ for forty years, and the conductor was Thomas O'Brien, who had been in the service for over thirty years. Although the final trip was made in the month of July, a lot of old paper was stuffed into the car stove and set afire to give an appearance of realism, and as the ancient car rattled along with smoke pouring from its battered pipe, it excited the wonder and amazement of the people in the street.

## ELECTRIC ADVERTISING SIGNS

### Restrictions by the Fuel Administrator

The discussions of the subject of electric street-signs from the standpoint of civic beauty which have been going on in late years have given special interest to the recent regulation of the use of electricity for the purpose of conserving fuel for war purposes.

This subject began to assume importance in the month of October, 1917, about which time "The Black Diamond," the organ of the coal trade, urged that the use of electricity for street advertising signs was a pure waste of fuel. The magazine said:

"We mean that the Great White Way of New York and its counterparts in every part of the United States should be at an end until the war is over. We mean that the electrically lighted billboards should be put out of commission until the end of the war. We believe further that every public restaurant should be closed at 8 o'clock at night. These things should be done, first,

to save the coal wasted, and, second, to save the food that is needlessly consumed."

On October 31, 1917, Mr. John W. Lieb, Jr., Vice-President of the New York Edison Co., went to Washington to confer with Dr. H. A. Garfield, Fuel Administrator, on the matter.

Mr. Lieb was quoted in the press as saying that the special "White Way" lighting consumed only about six-tenths of 1 per cent of the total output of the power houses. To discontinue this display lighting of all of the larger cities of the country would, he said, mean a saving in coal of less than one-tenth of 1 per cent. This was so, he explained, because tungsten lamps of the smallest sizes were used in the signs. They produce great brilliancy and so the casual observer thinks they consume much coal, he said. Soft coal is used for this purpose. Mr. Lieb argued, as an offset for the relatively small saving of coal, the psychological value of bright and cheerful streets at a time when depression of the public mind was to be avoided. He called attention to the fact that while our allies prohibit street illumination and displays in order not to invite hostile air craft, they have found it necessary to maintain theatres, moving picture shows, and other forms of entertainment to help cheer up the soldiers. He said, however, that if it appeared important to the national or municipal authorities to eliminate the signs the lighting and power companies throughout the country would co-operate in every way, without regard to any loss of revenue.

On November 9, 1917, Dr. Garfield signed an order directing that after 11 o'clock at night all of the big advertising signs in New York and other cities be darkened and that they be not turned on before 7:45 o'clock in the evening. Exception was made in the order for signs maintained by small merchants to direct the public to their places of business. Dr. Garfield explained that he was anxious to avoid interference with legitimate business, but he was determined that every ton of coal possible should be conserved for industries essential to the war.

Experts have estimated that at least 250,000 tons of coal are used in a year for lighting advertising signs, and this amount of coal would be sufficient to supply the household needs of 100,000 families. Some estimates go as high as 500,000 tons used for

this purpose. The Fuel Administrator had figures to show that it would be possible to save not less than 50 per cent of the fuel used in maintaining the signs without working any real hardship.

The Fuel Administrator's order went into effect on the evening of November 15, 1917. The effect on the Broadway theatre district from 33d street to 59th street was noticeable, but the street was not sombre.

In December, the Fuel Administrator went further and ordered two "lightless" nights a week, on Sundays and Thursdays. This order went into effect on Sunday night, December 16, but without any notable effect on Broadway. On the following Thursday night, however, the effect was appreciable. Not only were the big display signs unlighted but every one of the large theatres, restaurants and hotels used only the lights that were actually necessary for the safety of their patrons. Most of the restaurants did not even have lighted the signs bearing their names.*

On December 31, 1917, the following order was issued, imposing still further restrictions:

United States Fuel Administration
Order of Albert H. Wiggin,
New York State Administrator

By virtue of powers conferred upon me, I hereby issue the following orders, to take effect Jan. 2, 1918:

1. On Saturday nights lighting is permitted, subject to the restrictions imposed by order of the United States Fuel Administration, Dated Nov. 9, 1917, and order of the undersigned, dated Dec. 8, 1917.

2. On all other nights all signs of every kind, including merchants' signs, signs for theatres, and all other places of entertainment, display signs, lighting on buildings and elsewhere, hotels and advertising signs, are ordered to discontinue completely.

3. Stores and offices and commercial buildings not open for business shall not use inside lights more than absolutely necessary for safety. Cluster lights and illumination generally must be reduced to only so much lighting as is necessary for safety.

4. No more outdoor lighting shall be used than is absolutely necessary for safety of streets, passages, dangerous places, and protection of the public, or as required by law.

* On April 22, 1918, Dr. Garfield issued an order suspending lightless nights after the following Thursday.

5. No person, partnership, corporation or association furnishing electricity or gas or using the same shall use any coal, oil, or gas or other fuel for supplying of electricity or gas, excepting subject to the restrictions and conditions contained in this order.

6. County Administrators are directed promptly and strictly to enforce this order.

United States Fuel Administration
By Albert H. Wiggin,
New York States Fuel Administrator.

## BILL-BOARDS AND SIGNS

### New York City Bill-board Advertising Commission

The first efforts of the American Scenic and Historic Preservation Society toward the control of out-door advertising and the abatement of the so-called "poster nuisance" were made in the winter of 1901–02, and an examination of our Annual Reports for the past 16 years will show how persistently this campaign has been kept up and how wide the movement has since become.

During the past few months there have been two interesting developments in this field. One is the continuation, by Mayor Hylan of New York, of the Billboard Advertising Commission of his two predecessors, with some changes of personnel; and the other is the introduction in the Legislature of a bill to tax billboard advertising.

The valuable work of the Mayor's Billboard Commission, first appointed by Mayor Gaynor and continued through the administration of Mayor Mitchel, was reviewed in our Annual Report for 1914 at pages 187–190. Owing to constitutional and legal difficulties, the commission was unable to achieve all the ends it had in view. A more promising situation was created, however, by the decision of the United States Supreme Court in January, 1917, in the case of Thomas Cusack Company, plaintiff in error, against the City of Chicago et al., fully reported in our Annual Report for 1917 at pages 392–397. This decision, in short, sustained an ordinance providing that the majority of the frontage owners on a given block of residences could decide whether billboards should be erected on the block. Encouraged by this decision by the highest tribunal of the United States, and also realizing the need of discovering new sources of public revenue to

meet the increased expenses of government, a few citizens called on Mayor Hylan of New York early in 1918 to suggest to him that the present was an opportune time for a New York City ordinance similar to the Chicago ordinance, and also for the raising of revenue by means of the taxation of out-door advertising. The Mayor received his callers with great courtesy, manifested deep interest in the subject, and before his callers left announced to them his intention to appoint a commission in continuation of that of his predecessors. The personnel of the commission, recently announced, is as follows: Hon. Bruce M. Falconer, Alderman from the 23d district and counsel of the Fifth Avenue Association; Col. Henry W. Sackett, First Vice-President of the American Scenic and Historic Preservation Society; Mr. William H. Browning, of the firm of Browning, King & Co.; Mr. Frank B. Williams, chairman of the Billboard Committee of the Municipal Art Society and chairman of the City Planning Committee of the City Club; Mr. Theodosius Stevens, counsel of the Bronx Parkway Commission; Mr. Edmund B. Wells, of the Architectural League; and Mrs. Frederick C. Hodgdon, chairman of the Civic Art Committee of the Woman's Municipal League. Alderman Falconer is chairman of the Mayor's Billboard Commission. Col. Sackett and Mr. Wells were members of the commission under Mayors Gaynor and Mitchel.

### Bill to Tax Out-door Advertising

The other important event of the year having relation to out-door advertising was the introduction in the New York State Senate on March 26, 1918, by Hon. Theodore Douglas Robinson of Schenectady, of a bill (introductory No. 1081, printed No. 1353) "to amend the Tax Law relative to the assessment and collection of out-of-door advertising." This bill, even if it does not become a law at the present session,* is of interest as representing the latest progress in this direction, and we give its full text herewith for future reference:

* The bill failed to pass.

The People of the State of New York, represented in Senate and Assembly, do enact as follows:

Section 1. Chapter sixty-two of the laws of nineteen hundred and nine, entitled "An act in relation to taxation constituting chapter sixty of the consolidated laws," is hereby amended by inserting therein a new article to be known as article sixteen and to read as follows:

## ARTICLE XVI.

### Taxes on Out-of-Door Advertising and Advertising Devices.

Section 350. Tax on out-of-door advertising.
351. Definitions; application of article.
352. Exemption from tax.
353. Rate of tax.
354. Annual tax; when due; to whom paid.
355. Computation of taxable area.
356. Application for tax receipt; statement of tax due.
357. Changes in advertising structures.
358. Identification plate or label.
359. Disposition of tax.
360. Removal of unauthorized advertisements; penalties for unauthorized display or removal of notices.
361. Designation of officers for enforcement of article.
362. Duties of state board of tax commissioners.

§ 350. Tax on out-of-door advertising. There is hereby imposed a tax at the rate hereinafter prescribed on out-of-door advertisments and advertising devices, now maintained or hereafter erected, displayed and maintained in the cities, villages and towns of the state, and such tax shall be assessed, paid and applied, and such advertisements and advertising devices shall be regulated and controlled as provided in this article.

§ 351. Definitions; application of article. 1. Advertisements or advertising devices made the subject of taxation and regulated as provided in this article, mean and include the out-of-door public display of any advertisements or advertising devices painted, printed, pasted, posted on, or otherwise affixed to, any building, bill-board or structure of any kind on real property.

2. The tax imposed by this article on out-of-door advertising shall be deemed to be imposed with reference to each separate bill-board or other advertising structure, or in case of such advertisement on the roofs, walls or sides of a building, with reference to each separate surface occupied with advertising matter, for the

time for which the tax is paid, whether the advertisement displayed on such bill-board or structure or in said space shall be the same for the period for which the tax is paid, or shall be changed from time to time.

3. The tax hereby imposed and the provisions of this article shall also apply to advertisements or advertising devices maintained and displayed on any bill-board or other structure, wall, fence, railing, platform or station, erected or constructed in, under or upon any public street or highway or other public place, and the owner or lessee of any such station, platform or other structure shall be deemed to be the owner or lessee of real property for the purposes of this article.

§ 352. Exemption from tax. There shall be excepted from and not taxable under this article:

1. Signs, announcements or devices advertising goods manufactured or the business conducted, or a performance given upon the premises, or giving the name of the person, firm or corporation manufacturing the goods or conducting the business or giving the performance, or stating the location of the premises or of other places of business of the occupant. Except in the case of the owner or the lessee of the entire parcel of real property or building, the exceptions of this paragraph shall apply only to that portion of the property or building occupied by the business to which the sign, announcement or device relates.

2. The name or address of any building and of any person doing business therein put upon said building; notices upon any real property stating that the property is for sale or rent; danger or cautionary notices relating to the premises; advertisements or notices required by law or in any legal proceedings or put up by public authority.

3. Signs containing only (a) the name of the adjacent highway, or (b) warning of the condition of or dangers of travel on a highway, or (c) the distance or direction of any city, village or public place, or (d) the name of any automobile association or club, or board of trade or similar civic organization erecting such signs, or (e) either or both of such designations.

4. Notices of any railroad or other transportation or transmission company necessary for the direction or information or safety of the public or announcing the name of any station or office of such company.

5. Signs or advertisements or advertising devices (a) maintained and displayed inside a building, or (b) within a show window actually and chiefly used for the display of merchandise of the

class or character, of the articles described in the advertisement, and notices so displayed announcing a lecture or entertainment not a professional theatrical performance.

§ 353. Rate of tax. 1. The tax herein imposed shall be paid for each square foot of the area of the advertisement or advertising device to which it shall apply, computed as hereinafter provided.

2. The rate of tax imposed on advertisements and advertising devices subject to tax as herein provided shall be as follows:

a. In a borough in a city of the first class having by the last state census a population of seven hundred thousand or more, such tax for the first nine square feet shall be at the rate of sixty cents a square foot, and for the next nine square feet or any portion thereof at the rate of ninety cents a square foot, and for the next nine square feet or any portion thereof and for all in excess of such area at the rate of one dollar and twenty cents a square foot.

b. In a borough in a city of the first class having a population of less than seven hundred thousand, and in any other city of the first class, such tax for the first nine square feet shall be at the rate of fifty cents a square foot, and for the next nine square feet or any portion thereof at the rate of seventy-five cents a square foot, and for the next nine square feet or any portion thereof and for all in excess of such area at the rate of one dollar a square foot.

c. In all cities of the second and third classes, such tax for the first nine square feet shall be at the rate of forty cents a square foot, and for the next nine square feet or any portion thereof at the rate of sixty cents a square foot, and for the next nine square feet or any portion thereof and for all in excess of such area at the rate of eighty cents a square foot.

d. In towns and villages outside of cities, such tax for the first nine square feet shall be at the rate of twenty-five cents a square foot, and for the next nine square feet or any portion thereof at the rate of forty cents a square foot, and for the next nine square feet or any portion thereof and for all in excess of such area at the rate of sixty cents a square foot.

3. In case of an advertisement or advertising device maintained and displayed in or upon a station or structure of a subway, elevated or other rapid transit road, street railroad or railroad, the rate for each square foot of surface of such advertisement or advertising device, computed as hereinafter provided, shall be as follows: In cities having a population of one million or over, one dollar; in other cities of the first class, seventy-five cents; in cities of the second class, fifty cents; and in all other places, thirty cents.

If the area of such advertisement or advertising device, computed as hereinafter provided, shall exceed twenty square feet, such rate shall be doubled; if such area exceed forty square feet, the rate shall be trebled, and the rate for the entire surface shall progress in like manner for each twenty square feet of surface of the advertisement.

§ 354. Annual tax; when due; to whom paid. The tax imposed by this article shall be for the calendar year beginning January first and shall be payable in advance. The tax imposed upon advertisements and advertising devices taxable under this article maintained when this act takes effect, and upon advertisements and advertising devices erected, maintained and displayed after January first in any year, shall be computed by monthly parts and shall be payable for as many twelfths as there are months or parts of months remaining in the calendar year for which the tax is imposed, but not for less than three months. The minimum tax for any period shall be one dollar.

The tax hereby imposed shall be assessed and collected in a city by the mayor thereof or by some officer to be designated or appointed by him; in a village by the president thereof or by some officer designated or appointed by him; and in a town by the supervisor thereof.

§ 355. Computation of taxable area. The number of square feet in any advertisement or advertising device shall be computed by measuring its longest horizontal and vertical dimensions, so that the area taxed shall be a rectangle, whether or not the entire space is covered by the advertisement or device. In case of an advertisement or advertising device which is affixed to a structure erected on supports above the ground or above the roof of a building, the area shall be computed by measuring the smallest rectangle in which it is possible to include all parts of such structure.

§ 356. Application for tax receipt; statement of tax due. 1. The owner or lessee of any real property desiring to maintain and display, or to permit to be maintained and displayed, upon such real property any taxable advertisement or advertising device or to increase the dimensions of one upon which a tax has been paid, shall make application in writing to the officer of the city, village or town in which such real property is located to whom the tax is required to be paid. Such application shall contain the name and address of the applicant, the location of the property, and shall state the dimensions of the advertisement, advertising device or advertising structure, so that the taxable area thereof may be ascertained. There shall also be submitted with such application a plan showing the location of such advertisement,

advertising device or advertising structure, and a brief description sufficient to identify and classify the same.

2. Upon receipt of such application and if satisfied that the statements therein contained are accurate and in sufficient detail, the officer to whom the application is made shall furnish a statement to the person applying, setting forth the amount of tax due and payable for maintaining such advertisement or advertising device or for the erection and maintenance thereof. Upon payment of the tax due, such officer shall issue a receipt therefor bearing an identifying number and stating the amount of the tax, the period for which it is paid and the location of the real property.

3. The officer to whom applications are made as herein provided shall keep an accurate record of such applications and of the tax receipts issued by him, specifying the identifying number thereof, the name of the applicant, the location of the real property, the description of the advertisement or advertising device and the amount of tax paid.

4. The officer whose duty it is to assess and collect taxes hereby imposed shall ascertain whether advertisements or advertising devices subject to tax hereunder are being maintained or displayed in the city, village or town in which he has jurisdiction, and if no application is made for the maintenance and display of such advertisement or advertising device, or if the application made is incomplete or unsatisfactory and the applicant neglects or refuses to correct or amend the statements therein, such officer shall estimate the area of such advertisement or advertising device and impose a tax thereon at the rate herein prescribed, according to his judgment and belief. Upon ascertaining and imposing such tax he shall give notice to the owner or lessee of the real property upon which such advertisement or advertising device is maintained and displayed and such tax shall be due and payable from the time of the service of such notice.

§ 357. Changes in advertising structures. If at any time the person who has paid a tax for the maintenance and display of any advertisement or advertising structure, space or devices as provided in this article shall, during the term for which such tax has been paid, desire to enlarge or relocate the same upon the same premises, or make any structural changes therein, other than those incidental to the repair of the same or to changing the advertisement in the space thus occupied, for which the tax has been paid, he shall make a new application therefor stating also briefly the particulars of the old application and the amount of tax paid thereon, and if the tax payable upon the new advertising struc-

ture, space or device shall be greater than that upon the old deduction shall be made from the amount of such greater tax of whatever sum has been paid on such former application for the same period.

§ 358. Identification plate or label. Every taxable advertisement, advertising device or advertising structure shall have affixed thereto or painted thereon a plate or label in a form to be prescribed by the state tax commission, which shall legibly state the name of the person, firm or corporation maintaining such advertisement, advertising device or structure, and that the tax imposed upon such advertisement has been duly paid, and shall state the number of the tax receipt issued therefor. The absence of such plate or label shall be prima facie evidence of the nonpayment of the tax. The mayor of the city, the president of the village or the supervisor of the town, in which such advertisement or advertising device or structure is being maintained and displayed, or any authorized representative of such officer or any peace officer when duly designated by such officer, may inspect any such advertisement, advertising device or structure at any reasonable hour during the day time, and for such purpose may enter the premises upon which the same is erected or maintained or to which it is attached.

§ 359. Disposition of tax. The taxes imposed by this article shall when collected be paid into the general fund of the city, village or town in which the taxable advertisement or advertising device is located, and shall be used and applied for the same purpose as other general funds of the city, village or town.

§ 360. Removal of unauthorized advertisements; penalties for unauthorized display or removal of notices. 1. If an advertisement or advertising structure or device shall be maintained and displayed upon real property without the payment of the tax hereby imposed, the officer charged with the collection of the tax shall notify the owner or lessee of such real property of the amount of tax due by serving notice of such amount upon such owner or lessee, in person or by mail, to his last known address, or if such address is unknown, by posting such notice upon such advertisement or advertising device. If such tax is not paid or such advertisement is not removed or obliterated within thirty days after such notice, the mayor of the city, the president of the village or the supervisor of the town may bring suit against the owner or lessee of such real property for the recovery of such tax together with the penalties imposed as provided in this section.

2. No taxable advertisement or advertising structure or device shall be erected, maintained or displayed upon any real property,

nor shall its dimensions be increased unless the tax imposed by this article shall have been paid. The owner or lessee of any real property permitting an advertisement or advertising device to be maintained or erected upon such real property without the payment of the tax imposed by this article shall be liable, in addition to the tax, to a penalty of twice the amount of such tax, to be collected by suit by the mayor of the city, president of the village or supervisor of the town in which such real property is located.

3. No person shall be taxable or liable to a penalty on account of an advertisement or advertising structure or device maintained and displayed upon his property without his knowledge, or for which he receives no compensation, provided he removes the same within thirty days after he has received notice that the tax on such advertisement or advertising structure or device has not been paid.

4. Any person who shall erect, maintain, post, print or otherwise attach or affix any taxable advertisement or advertising structure or device upon any real property without the consent of the owner or lessee thereof, or shall remove or deface or destroy, without reasonable cause therefor, any notice affixed under the provisions of this section or any identification plate or label attached to such taxable advertisement, advertising structure or device, shall be guilty of a misdemeanor.

§ 361. Designation of officers for enforcement of article. A mayor of a city, president of a village or supervisor of a town may designate an existing city, village or town officer or may appoint an officer to perform the duties prescribed by this article. The compensation for the performance of such duties shall be fixed and paid in the same manner as for other city, village or town officers. If the duties hereby required to be performed are delegated to an existing officer, additional compensation may be allowed therefor in like manner.

§ 362. Duties of state board of tax commissioners. The state board of tax commissioners shall prescribe the form of applications, tax receipts, plates and labels required to be used under this article, and such board shall have the same powers and duties as to the enforcement of the provisions of this article as are imposed upon them in relation to the assessment and taxation of real property. Such board is hereby authorized to make rules to secure the proper application and enforcement of the provisions of this article.

§ 2. This act shall take effect July first, nineteen hundred and eighteen.

## DAYLIGHT SAVING TIME CHANGE

Not to be reckoned of equal importance with the adoption of the Gregorian calendar, and yet not much less important than the adoption of the zone system of standard time in the United States in 1883, is the adoption by Congress of the law " to save daylight and provide standard time for the United States," which went into effect at 2 a. m., Sunday, March 31, 1918 (Easter Day). In accordance with this law, the hands on all time-pieces in the United States were directed to be moved forward one hour, so that 2 o'clock would be changed to 3 o'clock. This regulation remains in force until the last Sunday in October, when the hands will be set back an hour.

The object of this law is to start human activities an hour earlier than usual during the seven months of the year when the sun rises early, in order to economize in the use of artificial light. It is estimated that the change in time will cause a saving in gas and electric bills in this country of about $40,000,000 and the saving of over a million tons of coal in manufactures. It is also expected to afford relief from the frequent exhaustion caused by the last hour's work on hot summer afternoons; also to stimulate indirectly the production of ships, munitions and other war materials; to increase the production of food; and to improve the health of communities by offering an additional hour in the summer months for recreation through baseball, tennis, and other daylight sports.

The idea of daylight saving was originally suggested by Benjamin Franklin as early as 1784. For many years prior to 1916 efforts were made in several countries to secure the adoption of the plan, but without avail. At length the idea began to appeal to the practical common sense and the subject was discussed seriously by scientists and economists. Germany adopted the plan, and in that country it went into effect May 1, 1916. Several other countries, including England, followed the example. In the New World, Nova Scotia was the first to adopt it. Among the pioneers in the United States was George Frederick Kunz, Ph. D., Sc. D., President of the American Scenic and Historic Preservation Society. On May 19, 1916, he presented a paper on the subject, covering 22 pages of type-written manuscript, before the United

Engineering Societies, and copies of it were sent to the representatives of each society for further consideration. On May 31, 1916, he sent his views to Hon. William P. Borland of Missouri, Member of Congress and a member of the Appropriations Committee of the House of Representatives, who had under consideration the idea of introducing a bill applying the daylight saving plan to the District of Columbia and the territories of the United States. During the next two years, Dr. Kunz kept up the propaganda, at first at his own expense. As retiring Chairman of the Social and Economic Science section of the American Association for the Advancement of Science he presented the subject again before that body on December 27, 1916. When, in that year, the New York Committee on Daylight Saving was organized, with Hon. Marcus M. Marks as chairman, he became a member of the Executive Committee, and upon its invitation once more presented the arguments in favor of the plan at the Daylight Saving Convention held in the Hotel Astor, New York City, on January 31, 1917.

The change of time was marked by ceremonies in New York City beginning at 11:30 p. m., Saturday, March 30, 1918, and ending at 2–3 a. m. on Sunday. In Madison Square there was an open-air program, consisting of motion pictures, band music, singing by the Community Chorus, speeches, and manoeuvres by a company of marines. The Aldine Club, in the Fifth Avenue building on the west side of Madison Square, gave a reception in honor of Hon. Marcus M. Marks, President of the National Daylight-Saving Association, who, as President Wilson's representative, pressed an electric button, causing the hands on the great illuminated clock on the tower of the Metropolitan building to move forward from 2 to 3 o'clock.

In the Borough of Brooklyn, there were exercises on the steps of Borough Hall in which Borough President Riegelman and United States Senator Wm. M. Calder, among others, took part. Senator Calder was sponsor for the daylight saving act in the United States Senate and did much to forward the movement.

## HISTORY IN TELEPHONE NAMES

### Co-operation with New York Telephone Co.

During the past two years it has been our pleasure to co-operate with the New York Telephone Co., in the selection of historical names for its central telephone stations in New York City. Probably few of the hundreds of thousands of persons* who make the millions of calls over the New York City telephone lines have any idea of the care taken in the selection of telephone "central" names, and we take this occasion to express our appreciation of the civic spirit and the discriminating intelligence shown by the New York Telephone Co. in this matter. The names adopted by it are an excellent example of the perpetuation of historical memories and traditions in public nomenclature. Some of the names adopted are old local place-names, such as Chelsea, Murray Hill, Bowling Green, Harlem, etc.; some are street names, such as Broad, St. Nicholas, Spring, and many are the names of persons conspicuous in the history of the city, such as Stuyvesant, Hamilton, Cortlandt, Audubon, Greeley, etc. There is always some local propriety to the adoption of these names, and their selection involves researches into the history of old farms and land holdings, early residences, and other landmarks of the early settlers and leading citizens. Back of each of these names, therefore, there is a history, and the student of local history will find much of interest in pursuing the lines of inquiry thus suggested.

The selection of a telephone name, however, is not a simple matter. The name must not only be appropriate, euphonious, and acceptable to the residents of the particular locality to which it is to be applied, but it must also possess certain phonetic qualities which will make it distinctive in transmission by telephone so that it will not be confused with any other similar name. The following description of the successive steps followed in making choice of a name is taken substantially from the Telephone Review.

The first steps are taken in the office of the Traffic Engineer, where experts especially assigned to the work maintain numerous card records and files of information, which are constantly being

* There are approximately 400,000 subscribers listed in the New York City telephone directory.

augmented. The work of eliminating undesirable names is as important as the selection of desirable names. As an illustration may be cited the processes gone through in selecting the name "Cathedral," which went into effect in 1914. The district to which it is applied lies adjacent to the Cathedral of St. John the Divine, which is located between 110th street, 113th street, Amsterdam avenue and Morningside drive.

The name "Cathedral," adopted in August, 1914, and used for the first time in the October, 1914, issue of the Telephone Directory, was given to a district which was planned three years before, but the location of which was later changed. The telephone company's files show that as early as July, 1911, a "Memorandum relative to the Name for the Second Morningside central office" was written, containing a list of all the names of avenues and streets — past and present — parks, descriptive names and others not descriptive, and the names of owners of former estates in the ultimate district, which was bounded by 125th street, Lenox avenue, 136th street, and the Hudson river. All the names which might possibly be eligible for this use were included in the lists. It was carefully scanned for any that would obviously be confused with existing central office names, and if any appeared, they were eliminated at the start.

Before the matter had progressed so far as a decision, however, the growth of the telephone in the Morningside District forecast a radical change in the area to be comprised in the new district, and the creation of still other districts. Accordingly, in June, 1914, the ultimate boundaries of the district under consideration were definitely changed to the North River, 116th street, Lenox avenue and 110th street or Cathedral Parkway.

It was therefore necessary to prepare an entirely new list of names for the new central office, and repeat the entire process of selection.

This new list of names was finally reduced by elimination to six, one of which was "Cathedral." These names were then carefully tested in the same manner as in the first instance and recommendations were made on the basis of the experiments. These recommendations were submitted to the Engineer, Division Commercial Manager, and Division Superintendent of Traffic, with

a brief statement of the reason for electing each name and of its standing in the test that had been conducted. Here other factors entered, and although "Cathedral" did not stand the test as others, it was finally adopted as being by far the most characteristic one that could be found for the district to be served, both at that time and, increasingly, in the future.

In addition to the appropriateness of a central office designation with reference to the location of the district, the ease of transmission and accuracy of understanding are the most important characteristics.

The appropriate names that have been selected for test, and about 150 names of existing central office districts, are listed in such a way as to make each name that is being tested appear in association with each existing name with which it might possibly be confused over the telephone. Each of these names, therefore, is repeated a number of times in the list, so that the completed list comprises in all from 500 to 800 listings. Copies of this list are then distributed to the central office where the tests are to be conducted.

First, an operator assigned to the test is given a list to read in order that she may become familiar with the new names. This operator then takes her place at a telephone instrument and records the names and numbers as they are read to her over the telephone by a second operator who has been furnished with a list for this purpose. When this list has been completed, the first operator returns to her regular work, and the operator who has just read the list takes her place and records, while a new operator does the reading.

This process continues until the number of recorded lists assigned to this central office has been completed.

The lists are made up in such a way, and are read over the telephone and recorded by different operators a sufficient number of times, so that each of the new names will be tested approximately 1,000 times.

In many of these tests the names are read over the telephone and recorded in the aggregate form 80,000 to 100,000 times.

Each central office name in the list is preceded or followed by a fictitious number, which also plays an important part in the test.

A careful record is kept, showing the accuracy of understanding, the number of errors in recording, the confusion between names, and many other points of interest which may be noted at the time.

These statistics are then carefully analyzed to determine the ease of transmission and the facility of repetition. In this way is determined from a traffic standpoint the best name to be assigned to a new central office district.

Before definitely accepting the name "Cathedral" it was considered advisable to learn whether or not there would be any possible objection to the use of the name on the part of those most closely connected with the Cathedral of St. John the Divine.* Accordingly, the representative of the telephone company called upon the Dean of the Cathedral, the late Very Rev. William M. Grosvenor, D. D., and explaining the situation to him asked for his approval of our selection. The Dean talked the matter over with Bishop Greer and then wrote to the company as follows:

"I have just received word from Bishop Greer and both he and I, in behalf of the Trustees of the Cathedral of St. John the Divine, very gladly consent to the New York Telephone Company calling one of their new centrals either 'Cathedral' or 'Cathedral Heights' whichever they may determine to be wisest."

At the meeting of the Executive Committee of the telephone company, held on August 26, 1914, the name "Cathedral" was approved. This approved recommendation bears the personal signatures of Messrs. R. H. Boggs, Traffic Engineer; J. H. Gordon, Jr., General Superintendent of Traffic; J. A. Stewart, General Manager; H. F. Thurber, Vice-President; F. H. Bethell, Vice-President; W. Hoppins, Assistant Secretary; and U. N. Bethell, President.

The name "Cathedral" as a central office designation, therefore, appeared for the first time in the October, 1914, issue of the Telephone Directory, and was first used on November 16, 1914.

* The telephone company also inquired of the authorities of St. Patrick's Cathedral, at Fifth avenue and 50th street, if they had any objection to the application of the name "Cathedral" to the district contiguous to the Cathedral of St. John the Divine, and learned that they had none.

## BROOKLYN LANDMARKS

### Increased Interest and Activity in their Preservation

In the number of visible evidences of ancient occupation, Brooklyn excels all of her sister boroughs, and the artist, the architect and the historian, who are interested in old colonial houses, particularly houses of the old Dutch type, will find much material for study in the landmarks of that borough.

Several events in 1917, some of which we have mentioned at length in other pages, conspired to call attention to the increased interest in historic preservation in this part of the city.

For several years past, this interest has been cultivated by the American Scenic and Historic Preservation Society, the City History Club, the Sons of the Revolution, the Sons of the American Revolution, the corresponding societies of Daughters, the Colonial Daughters of the Seventeenth Century, and the Long Island Historical Society, which have been instrumental, directly or indirectly, in the preservation of landmarks and the erection of monuments and tablets; but particular credit is due to the Kings County Historical Society, which was organized in January, 1911, for the great stimulus which it has given to the movement during the past seven years. In response to our request, Mr. Charles A. Ditmas, President of that society, has kindly furnished us with the data for pages 269–274 following.

Kings County is rich in historic places. It was settled by the Dutch at Nieuw Amersfoort, later called under the English Government Flatlands and now a part of the Borough of Brooklyn, in 1636. In many localities it retains some of the old farm houses of early days. Six church organizations, situated in the six original towns, antedate 1700 although the oldest church building dates from 1796. Two of these organizations there is reason to believe were organized on February 9, 1654 — that at Nieuw Amersfoort in the morning and that at Midwout (Flatbush) in the afternoon. All are in a flourishing condition. The churches at Flatlands and Flatbush both have tablets erected by the Colonial Daughters of the 17th Century commemorating their history. Both are set in God's Acre containing the graves of the people of their township and in the case of Flatlands the graveyard is still

in use. The graveyards attached to the churches at Flatlands, Flatbush, New Utrecht and Gravesend are kept in splendid condition. That of the Brooklyn Church has been removed to Greenwood Cemetery and it also is kept in perfect proper condition.

An idea of the landmark treasures of Brooklyn, some of which are well cared for either by private owners or by the Park Department, but many of which are in danger of destruction and should be preserved, may be gained from the following list of some of the more notable among them. All of the houses mentioned on the following pages are still in existence unless their removal is stated:

### Gowanus

Vechte-Cortelyou house, on the east side of Fifth avenue, between Third and Fourth streets. Only the foundation of this house remains, and it is completely buried under about 75 feet of earth on account of the filling up of the hollow in which the house stood. The house was built in 1699 by Claes Adrientie Van Vechten and was later occupied by Jacques Cortelyou. The site is marked by a handsome tablet, erected by the Sons of the Revolution, commemorating the stubborn stand which the Americans made at this house in the battle of Brooklyn. A movement is afoot for the removal of the dirt which has been filled in above the foundation and for the conversion of the place into a sunken playground while preserving the remains of the historic building. It has been suggested that it be called the Stirling Memorial Park and Playground, in honor of General Stirling.

### Flatbush

Lefferts house, formerly at No. 563 Flatbush avenue, on the northeast corner of the avenue and Midwood street, moved into Prospect Park on February 19, 1918, as elsewhere stated. The original house was burned in the battle around Flatbush in August, 1776. The present building was erected soon after, and has been altered at various times since. It shows considerable British influence. The Lefferts family have been prominent in the town of Flatbush since 1660. The present house was erected by Lieutenant Pieter Lefferts of the Flatbush Militia. Mrs. Ger-

trude Lefferts Vanderbilt, author of the "Social History of Flatbush," was born in it.

Vanderbilt house, at No. 610 Flatbush avenue, being on the northwest corner of Flatbush avenue and Chester court, opposite the block between Fenimore street and Rutland road. Antedates the Revolution; age uncertain.

Erasmus Hall (old building) on campus of Erasmus Hall high school, east side of Flatbush avenue between Church street and Snyder avenue. Erected in 1786 for an academy by private subscription to which Alexander Hamilton and Aaron Burr, among others, contributed; has graduated many distinguished men; became a public school in 1896; and is now surrounded by a beautiful modern high school building.

King's Arms tavern, occupied as such at the time of the Revolution. Located at 910 Flatbush avenue; was demolished in 1917 to make way for the new building of the Flatbush Savings Bank.

### New Lots

Van Siclen-Cornell house, on the northeast corner of Van Siclen avenue and New Lots road. Built about 1730.

Schenck house, in Highland Park (formerly Ridgewood Park), on the north side of Jamaica avenue opposite the block between Ashford and Cleveland streets. Erected 1705. Used as a toolhouse for the park, but kept in good condition by the Park Department.

### Flatlands

White Oak Tree, in the block bounded by Kings Highway, Utica avenue and Avenue G. An ancient landmark, mentioned in the patents from Governor Nicolls to the inhabitants of Flatbush and Flatlands in 1667. The tree is moribund and cannot long be saved, but its site can be marked in due time.

Van Nuyse homestead, at No. 1447 Ocean avenue, on the east side of the avenue, between Avenues J. and K. Age uncertain but over a century old. This house is one of the best types of Dutch Colonial houses which have withstood the ravages of time. The Van Nuyse family were among the finest and most prominent people of Kings County. On the farm attached to this house was

run the most noted races of the period of the Revolution. The name of this course was Ascot Heath. This family, so far as the name is concerned, have passed out of Kings County but they have left a name in church and state entitled to veneration.

Jan Ditmars homestead, on the old King's Highway (on the part now called Kouwenhoven place), at Avenue F. Erected about 1730.

During the Revolutionary War some British officers tied the owner, Johannes Ditmars, in bed and tried to hack open the cupboard which was known by them to contain a bag of gold. The slaves came to their master's rescue and captured one of the British. Ditmars was a well known patriot and had been hated by the British. The cupboard and some of the gold coin that was in it are still in possession of his descendants. The event occurred November 5, 1783. The house is the best example of the Dutch Colonial farm house standing, having been the home of well-to-do country gentlemen for nearly 200 years. Very fine Colonial woodwork makes it most attractive.

Cornelius Kouwenhoven house, on what was the old King's Highway, now at Kouwenhoven place and Avenue F. Erected before the Revolution on the farm of the old Dutch family of Kouwenhoven; age uncertain but very old.

Garret Kouwenhoven house, on what was the old King's Highway, now at Kouwenhoven place and Utica avenue. Erected before the Revolution; age uncertain but very old.

Jeronimus Lott house, southwest of Flatbush avenue and northwest of Avenue P. Erected about 1800.

Hendrick Lott house, southwest of Flatbush avenue, between Fillmore avenue and Avenue S. Kitchen erected about 1719; the main house about 1800.

Jan Schenck house, approximately at Avenue V and 62d street, on Mill Island, Jamaica Bay. Erected in 1656, and thought to be the oldest habitable house in the State of New York.

Garretson's tide mill, at Garretson's creek or mill-pond, approximately at Avenue V and Marsh street. Erected at least 200 years ago. Presented to the city with nearly 200 acres of land for a public park by Messrs. Alfred T. White and Frederic B. Pratt.

Bergen house, on Bergen's island (Bergen beach) on the northwest side of Avenue V near 72d street. Part erected probably in 1686 but most of it only about 100 years old.

Schenck house, in Canarsie Park. Built about 1770 and incorporating parts of an older house. Owned by the city and well cared for by the Park Department.

### New Utrecht

Van Pelt house, on the northeast corner of 18th avenue and 82d street. Erected before 1700. (See also page 251.)

Mile-stone, on east side of 18th avenue between 82d and 83d streets. (See account of dedication on page 246 under the heading of "Mile-stones.")

Van Brunt house, at No. 1752 84th street, on the south side of the street just west of 18th avenue. Erected in or about 1720. Used as British headquarters during the Revolution.

Nostrand house, on the northeast corner of 84th street and 16th avenue. Erected before the Revolution and known as Barrie's tavern. President Washington, while on a tour of inspection, was entertained here.

Liberty Pole, on the east side of 18th avenue, opposite 84th street, in front of the New Utrecht church. The original pole was erected by the inhabitants of New Utrecht when the British evacuated New York in 1783, which was the occasion of a great celebration. Here the American flag was first flung in the breeze by the patriots of the town. The pole stood until 1834 when it had to be removed and a second one was erected. The second pole was removed in 1867 and a fine one put up in its place. In 1908, a society of descendants of those who erected the first pole formed the New Utrecht Liberty Pole Association, and the present pole, the gift of Mr. and Mrs. T. C. Van Pelt, was erected on the same spot. It is surmounted by a carved eagle, measuring four feet across, which is said to have been on the original pole. An American flag has flown on this site on every public holiday since November 25, 1783.

Mile-stone, on Benson avenue near Bay 24th street.

### Gravesend

Voorhees house, on south side of the Neck road, opposite Homecrest avenue, and two blocks east of Ocean Parkway. Very old and historic; attributed to 1730.

Lake house, on south side of the Neck road, between East 4th street and Ocean Parkway. Erected before 1800.

Stillwell house, at No. 95 Neck road, being on the northwest corner of Neck road and Village road. Erected before 1800.

Mile-stone, on the King's Highway (inside the fence) 100 feet from Ocean avenue.

Mile-stone, at Neck road and Ryder's lane.

Van Siclen house, also known as the Hicks-Platt house and erroneously called Lady Deborah Moody's house, on the northwest corner of Gravesend avenue and Neck road. Erected before the Revolution at an unknown date; completely altered, but contains part of the original building. (See page 288 following.) Mr. Ditmas says that Mr. W. B. Lake has accurately located the site of the original stockade which the Gravesend settlers erected in 1645, and also the site of Lady Deborah's house which was on the northeast corner of the town stockade.

Other houses at Gravesend, to the number of half a score, erected before 1800.

## PROSPECT PARK, BROOKLYN

### Fiftieth Anniversary Celebration

On Saturday, October 20, 1917, the fiftieth anniversary of the opening of Prospect Park, Brooklyn, was celebrated with formal exercises arranged by the Brooklyn Civic Club in co-operation with the Park Department of Brooklyn. The ceremonies began with a luncheon at the Montauk Club, at which Mr. Victor A. Lersner, President of the Civic Club, presided. The other principal speakers at the luncheon were Messrs. George V. Brower, Elijah R. Kennedy and Richard Young, former Park Commissioners; Raymond V. Ingersoll, Park Commissioner for the Borough of Brooklyn; and John Y. Culver, former chief engineer of the Department of Parks.

Later, out-door exercises were held in the Park plaza at the memorial arch, where the chief speakers besides President Lersner

were Mayor John Purroy Mitchel; ex-Mayor David A. Boody of Brooklyn; Borough President Lewis H. Pounds, and United States Senator William M. Calder.

Mr. Charles L. Schenck is Treasurer of the Civic Club, and Mr. John B. Creighton is Executive Secretary.

### Modern History of the Park

The movement for a public park system in Brooklyn dates back to 1835, when commissioners were selected to lay out such a system for the City of Brooklyn. In 1839 maps were filed for a number of parks, and land for three of them,— Washington, Tompkins and City Parks — was acquired, but in 1847 an act was passed for the reversion of Washington Park to its original owners. Fort Greene Park was acquired pursuant to an act of 1847.

In 1859, a bill was passed providing for the appointment of a commission to select and locate park land, and under this act, and acts supplementary thereto, Prospect Park was established. The land acquired included not only the present Prospect Park and the lands between Flatbush avenue, Washington avenue and Eastern parkway, known as the East Side Lands, but also the territory bounded by Vanderbilt avenue, Douglas street, St. John's place and Washington avenue, which latter area was subsequently sold. The Civil War, however, prevented the development of the park, and it was not until July 1, 1866, that work was actually begun. From 1,300 to 1,800 men were then employed, and in October, 1867, the park was completed sufficiently to be thrown open to the public. The plans for the park were made by Messrs. Olmsted & Vaux, the celebrated landscape architects who laid out Central Park, Manhattan, and the Prospect Park work was carried on under their direction. From the Annual Report of the Department of Parks for 1902 we take the following paragraphs descriptive of the work of construction:

"The design of Prospect Park as laid out by Messrs. Olmsted, Vaux & Co., provided for a great natural park, as distinct from the artificial features of Central Park. The roads running from the main entrance, one to the west and the other to the east, toward the southerly entrance, followed the contour of the outlines of the park, preserving the natural slopes as far as possible, and cross-

roads were created throughout the territory, following the same grades and making accessible the more beautiful spots.

"The great stretch of meadow through the central portions, fringed on all sides by wooded hills, is one of the main features of the park. This meadow, about 4,000 feet long, has been preserved in its natural beauty.

"In 1869, Mr. C. C. Martin, later Engineer and Superintendent of the New York and Brooklyn Bridge, was appointed engineer in charge of the construction work in Prospect Park. Under his direction a vast amount of work was done in the park and on the roads, including the excavation of the lake, 62 acres in extent.

"In 1872 the well at the foot of Lookout Hill was sunk, an excavation 40 feet in diameter and 60 feet deep. This well serves to keep the waters of the lake pure and fresh for the enjoyment of boating in the summer and for skaters in the winter.

"With the completion of the main features, the Department, from time to time, undertook the development of the scheme.

"On the East drive was completed the plaza at the Shelter and Flower Garden. At this point the citizens congregate in great numbers in the summer season to watch the drivers, and in a small bay or arm of the lake has been created a magnificent display of aquatic plants. The Rose Garden and Lily Pond, the Vale of Cashmere and the Deer Paddock and pond have been created in the secluded section lying between the East drive and Flatbush avenue.

"It was originally intended to create a children's playground on the Flatbush avenue side of the park, near the Vale of Cashmere. The ground here is shaped like a bowl, and being at all times surrounded by banks of foliage, is always warm in summer, and at all seasons is protected from the winds. It was finally determined to be undesirable for use as a playground, and was consequently converted into a Rose Garden, which today is one of the most artistic features in Prospect Park. The centre of the ground is occupied by three basins, in two of which are cultivated aquatic plants, the Egyptian Lotus, the Victoria Regia, a plant whose leaves reach the diameter of eight feet, and other rare species of water lilies. The third basin contains a fountain, the design of which was made by Frederick MacMonnies. In the pond are fine species of goldfish. About these basins are banked roses of highly cultivated varieties, and a bank of shrubs and trees forms an artistic background for the garden.

"In the Vale of Cashmere, adjoining the Rose Garden, has been erected a marble balustrade along the edge of the small lake.

"On the summit of Breeze Hill was planted an old-fashioned flower garden, which furnishes a great amount of pleasure to the

citizens of Brooklyn, both old and young, and is visited annually by thousands of people. In the flower garden on the East drive the greatest display of bedding plants is provided for, and with the opening of spring hyacinths and tulips bloom, to be followed by other rare varieties of flowering plants, continuing throughout the season.

"A zoological collection in a small way has been started about the Farm House, which occupies a site on a hill near the main entrance.

"In 1892 the Litchfield Mansion, built in 1857, which prior to that time had been occupied by the original owners of a large portion of the land of Prospect Park, was surrendered to the Department, and from that time has been occupied as an office building. Near the Litchfield Mansion, at Ninth avenue and Seventh street, are the greenhouses and workshops.

"The original design of the park contemplated an elliptical plaza at the main or Flatbush avenue entrance and a circle at the southerly entrance. At the Ocean avenue and Fort Hamilton avenue entrance a circular plaza of smaller area has been laid out.

"The main entrance was greatly beautified by the erection, in 1892, of a grand memorial arch and huge granite columns, marking the gateway. Heroic groups, designed and executed by Mr. Frederick MacMonnies, were placed in position on the arch, facing the park, in 1898. Bronze eagles by the same sculptor were placed in position on the granite columns in 1901. The same year the granite pillars at the southerly entrance were ornamented by bronze equestrian groups by the same sculptor."

### Early History of the Park

In addition to its great natural beauty, Prospect Park has the additional interest of being the site of part of the Battle of Brooklyn (or Battle of Long Island, as it is sometimes called) on August 27, 1776. In the northeastern part of the park, on the East drive, about midway between the main entrance and the Willink entrance, is the famous Battle Pass, where the Maryland troops under General Sullivan made their heroic stand. This spot is marked by a bronze plate on a boulder beside the road. In 1895, a monument was erected by the Sons of the American Revolution at the foot of Lookout hill to commemorate the bravery of the Marylanders.

Mr. Charles A. Ditmas, President of the Kings County Historical Society, furnishes us with the following information concerning the marking of localities in the park:

In 1916, at the request of the Kings County Historical Society, made through Mr. Charles M. Higgins, Park Commissioner Raymond V. Ingersoll invited a committee of historians and persons who had personal knowledge, to go over Prospect Park with him and the Engineers of the Department and locate certain historic sites, which it was deemed wise to have marked. The old roads in the park were obliterated when the park was laid out fifty years ago. The engineers of the department had, however, located them as far as possible before the committee visited the sites. As the result of this visit and subsequent investigation, the Park Commissioner caused to be erected some thirty signs telling the history of the site. Many of these are general in their nature and are placed at the entrances to the park, but eight of them, erected in 1916, are specific in character. Of these, six were written by Mr. Charles M. Higgins, a Director of the Kings County Historical Society, one by Mr. Charles A. Ditmas, President of the Kings County Historical Society, and one by Mr. S. S. Bradley, Superintendent of the Park. These markers were painted on wood by the department. The colors used were an olive green body with buff letters, a color that harmonizes well with the foliage in the park. These colors have been adopted by the department for all park signs. The letters are sufficiently large to be read by passing automobilists and are easily read by those who walk. Following are copies of the eight specific markers erected in 1916:

*First Marker*

The first marker was a general one, erected at all entrances to the park. It reads as follows:

HISTORIC GROUND

The great Battle of Long Island was fought in Prospect Park and its vicinity August 27th, 1776.

This was our First Battle as a Nation — the first after our Declaration of Independence — and it was one of the most critical and important events in our National History. A greater British force was in action here than in any other battle of the Revolution, and it was much more critical and important than Bunker Hill.

The retreat of most of our fighting force over Gowanus Creek and Marshes, and the gallant checking of the overwhelming British forces under General Grant and Lord Cornwallis by General Stirling and his heroic Maryland soldiers at the Old Stone House of Gowanus, at Fifth avenue and Third street and opposite the vital center of the American lines on the west side of Gowanus

Creek, followed by the remarkable retreat of Washington with his whole army on August 29th, actually saved our young Nation at its very birth and at the most critical military situation ever existing in our National History.

There were four distinct engagements in this Battle. The first was at Battle Hill in Greenwood, the second in Prospect Park, the third at the junction of Fifth, Flatbush and Atlantic Avenues, and the last and most important at the Old Stone House.

A total of about 9000 Americans were involved against about 25,000 British and Hessians. Loss of Americans about 1200; loss of Enemy about 400.

See historic markers at various critical points in this Battle Ground, viz., at the Park Wall opposite First street, on the big meadow near the main entrance on the line of First street, and also on the East Drive, at Battle Pass, and in the Vale of Cashmere, and in the Rose Garden and on Lookout Hill.

STOP, LOOK AND LISTEN
"THE PLACE WHEREON THOU STANDEST IS HOLY GROUND".

Let us give undying Glory to the memory of our First National Heroes and Martyrs who fought and fell on this sacred Battle Ground to win our Liberty and Independence.

*Second Marker*

The second marker, written by Mr. S. S. Bradley, was placed on Lookout hill. It reads as follows:

LOOKOUT HILL

This hill at the time of the Battle of Long Island, August 27, 1776, was used as a Signal Station. There is no record of fighting at this point.

The Monument to the Memory of the Maryland Troops was placed at the foot of this hill as a tribute to their honor and glory, but the point at which they made their final stand is northwest of this point, near 3d street and 5th avenue.

After the Battle, on the plain to the east (now covered by the water of the Lake), the British maintained a camp for American prisoners. Officers held as prisoners in this camp were permitted access to the top of this hill, where they maintained a constant "Lookout" for the arrival of the French fleet that they hoped would come to the aid of their country.

*Third Marker*

The third marker, written by Mr. C. M. Higgins, was placed at the Ninth avenue wall of the park opposite First street. It reads as follows:

BATTLE OF LONG ISLAND, AUGUST 27TH, 1776

At this point an old road known as Freekes Mill Road, also as the "Porte Road", left the park and continued down the hill on the general course of First street, crossing Gowanus Creek and Mill Ponds and reaching the main line of American defence on the opposite side of Gowanus Creek.

Over this road our soldiers retreated after the capture of General Sullivan and our defeat by the Hessians at Battle Pass and, by burning the bridges behind them, prevented pursuit by the enemy into our lines west of Gowanus Creek.

This old road crossed the long meadows about in line with First street and branched into the East drive (then called "Kings Highway"), also "The Brooklyn and Flatbush Turnpike," at or near "Battle Pass."

### *Fourth Marker*

The fourth marker, prepared by Mr. Higgins, was placed on the Long Meadow by the North Drive. It reads as follows:

This marks the line where an Old road known as Freekes Mill road, also as the Porte road, crossed what is now the Long Meadow.

Over this road our soldiers retreated after the capture of General Sullivan and our defeat by the Hessians at Battle Pass and by burning the bridges behind them, prevented pursuit by the enemy into our lines west of Gowanus Creek.

### *Fifth Marker*

The fifth marker was prepared by Mr. Charles A. Ditmas, and was placed at Battle Pass on the East Drive near the place where the bridle path crosses the drive. It reads as follows:

SITE OF THE DONGAN OAK

This road follows the line of the Old Valley Grove road called by the early settlers the "Porte or Gate", meaning way through the hills. At the Battle of Long Island the Americans had on the hill to the east guarding the "Porte" a redoubt mounting two guns. By the road stood a large white oak tree, mentioned in the patent of Governor Dongan, November 12, 1685, as a mark between Flatbush and Brooklyn.

This tree was cut down and thrown across the road. With the dense woods on the south and swamps on the north, it made an important obstruction.

Americans commanded by General Sullivan valiantly maintained this position against the Hessian General de Heister until attacked from the rear by royal troops under General Clinton. They then retired in good order, bringing off their artillery.

*Sixth Marker*

The sixth marker, for which the inscription was written by Mr. Higgins, was placed at Battle Pass near the northeastern corner of the park. It reads as follows:

BATTLE PASS

At this point the old Porte road or Valley Grove road intersected the line of hills separating Flatbush from Brooklyn and Gowanus.

In the Battle of Long Island August 27th, 1776, this pass was barricaded in front by the Dongan Oak and other obstructions. It was protected by artillery on Redoubt Hill just to the East.

Here the American forces stood their ground against Hessians coming from the south till flanked from the rear by a body of British troops. General Sullivan was captured, but most of his troops retreated across what is now the long meadow, joining the Maryland and other troops for the final resistance near the Old Stone House at Gowanus.

*Seventh Marker*

Mr. Higgins prepared the inscription for the seventh marker, which was placed on the East Drive northeast of Battle Pass. It reads as follows:

COURSE OF THE OLD FLATBUSH AND BROOKLYN ROAD, THE "KINGS HIGHWAY"

This old road crossed through the adjacent valley and continued through the end of what is now the Rose Garden. It then crossed the present line of Flatbush avenue, curved north between the sites of the Reservoir and the Brooklyn Institute and finally joined the lower end of Flatbush avenue near the junction of Fifth avenue.

This was one of the lines of retreat of the American soldiers when defeated at Battle Pass. By it they reached the left flank of our line of defense at Fort Greene and Wallabout Bay. The other line of retreat was over the "Porte Road" and across Gowanus Creek into the center of our lines, our right flank being near Red Hook point.

*Eighth Marker*

The eighth marker, for which Mr. Higgins wrote the inscription, was placed on Redoubt hill in the Battle Pass or eastern part of the park. It reads as follows:

REDOUBT HILL

This hill was fortified with cannon to command the highway through these wooded hills in our first great national battle on August 27th, 1776. This pass was then the only highway through the hills between Flatbush, Brooklyn and Gowanus, being then part of the Old Flatbush and Brooklyn road and now part of our East drive.

Americans under General Sullivan held this strategic point, which was on our line of defense, the inner line being on the west side of Gowanus Creek.

As a result of a frontal attack by Hessians and a flank attack by the English, General Sullivan was captured. Most of his men retreated and joined General Lord Stirling at Gowanus Creek, where the chief and final engagement took place.

## Lefferts Mansion

The moving of the Lefferts house into Prospect park, before referred to, was accomplished shortly after 2 o'clock on the morning of February 19, 1918. The work was performed at this unusual hour because it was necessary to cut the trolley wires and suspend street car traffic on Flatbush avenue while the house was moved from its former location on the northeast corner of Flatbush avenue and Midwood street into Prospect park north of the Willink entrance.

The preservation of this old house, so earnestly sought by many civic societies and public spirited individuals, was finally accomplished through the endeavors of the Old Dutch House Preservation Committee, composed of the following members:

Chairman: F. A. M. Burrell
Treasurer: E. P. Maynard
Chairman of Finance Committee: Alex. C. Snyder

| | |
|---|---|
| William Hamlin Childs | Luke V. Lockwood |
| Walter H. Crittenden | Henry A. Meyer |
| Charles A. Ditmas | E. P. Morse |
| Herbert F. Gunnison | Frederic B. Pratt |
| A. Augustus Healy | Benjamin Prince |
| Charles M. Higgins | Alfred T. White |
| Thomas L. Leeming | Richard Young. |

The committee was named, at the request of Hon Raymond V. Ingersoll, formerly Park Commissioner for Brooklyn, by Mr. Healy, President of the Brooklyn Institute of Arts and Sciences, and Mr. Pratt, President of the Brooklyn City Plan Committee.

The Lefferts family gave the house, and $2,325 in money, and additional funds were raised by subscription, bringing the total up to $14,500 to pay for the expense of moving. The new Park Commissioner, Hon. John N. Harman, cooperated in the moving of the house and its location on its new foundation. The committee will be requested to decide upon the uses to which the venerable structure shall be put. It has been suggested that it be used in part at least for the preservation of relics of the Battle of Long Island and other Revolutionary days.

The house is known from the family founded in Brooklyn in 1660 by Lefferts Pietersen van Houghwout, who came from North Holland. In 1683, he was assessed to be worth 174 pounds and 10 shillings. In 1685, he was the recipient of a grant of land in the Vlacke Bosche, and became a man of substance in his day.

His grandson, John Lefferts, was also a man of consequence, having been a Judge of the Court of Sessions and Common Pleas from 1751 to 1761 and a County Judge from then until his death. He was an ardent patriot and a delegate to the First Continental Congress, May 2, 1775.

John Lefferts' son Pieter was a Lieutenant in the Flatbush militia, and lived in a house on the site of the house which has just been moved.

A few days previous to the Battle of Long Island, August 27, 1776, the Hessians vanguard of Lord Cornwallis' army, under command of Colonel Donop, wantonly fired and destroyed, after looting them, several of the farmhouses of old Flatbush, butchered cattle, stole everything of value that could be carried off, and emptied feather beds into wells. One of the large houses destroyed was that of Pieter Lefferts. After the war, he rebuilt it after the old style, and until its removal in February, 1918, it was one of the picturesque landmarks of the old Flatbush neighborhood. In this historical building was born Mrs. Gertrude Lefferts Vanderbilt, author of a "History of Flatbush," highly commended by the late John Fiske, historian. Among the descendants of the Lefferts family living in Brooklyn to-day are Dr. George M. Lefferts, F. R.; Mr. William H. Lefferts and Mr. Marshall C. Lefferts.

## HISTORICAL CALENDARS

### A New Medium for Teaching History

During the past 27 years, the issuing of yearly calendars, ornamented with a picture of some ancient landmark or historical scene, and bearing a brief historical description of the picture, has become a growing practice among title guarantee and insurance companies. The New York Title Guarantee and Trust Co. began the issuing of such calendars about 1890, at first intermittently, and then annually. The cards are ornamented with colored pictures about 8 by 11 inches in size, reproduced from paintings made at great expense by artists expert in the delineation of historical scenes and of costumes and architecture of the period. The Westchester and Bronx Title & Mortgage Guaranty Co., an allied concern, followed suit and in 1910 the Home Title Insurance Co. of New York, whose main office is in Brooklyn, began a series of calendars on the same principle. Several other of the leading companies in the United States have adopted this very commendable practice, with the result that a new and valuable medium of teaching American history, and particularly local history, has thus been created.

In some cases, particularly of those published by title and mortgage guarantee companies, the descriptions have a distinctive value, in that the title companies have records of land-ownership not available to the general public, and their experts are often possessed of precise information concerning farm lines and landmarks which is not to be found in the history books. But even when their descriptions are not based on such special information, they generally give in condensed form the substance of the particular subject covered.

As we are giving considerable space in this Report to the landmarks of Brooklyn, we reproduce herewith, as examples of this new school of history, the descriptions on the calendars of the Home Title Insurance Company during the past seven years.

### Melrose Hall

The 1910 calendar gave a picture of Melrose Hall, which formerly stood in the southeast corner of Flatbush avenue and Win-

throp street, opposite the southeast corner of Prospect park. The description reads:

This building was erected in the year 1749, on the east side of Main street (now Flatbush avenue), between Winthrop and Clarkson streets. During the Revolution it was owned and occupied by a British officer named Col. Axtell, and here a futile Tory plot was hatched for the capture of General Washington. The place was the scene of a pretty romance where a niece of Col. Axtell was wooed by a young American officer, Major Giles, who, after the war and winning Miss Shipton, purchased and lived in the old house.

In 1833 it became the home of Anna Cora Mowatt, then a bride of fifteen, and who afterwards became famous as an actress. She called her home Melrose Hall and made it a centre of much social gaiety. Dr. John Robinson later became the owner, and just after his death in 1879 this photograph was taken. The building was destroyed in 1903.

### Cortelyou House

The 1911 calendar gave a picture of the old Simon Cortelyou house which formerly stood near Denyse's ferry within the present limits of Fort Hamilton. The house has long since disappeared. The description on the calendar reads:

"In Wilson's Historic Long Island, published 1902, we find the following account of this interesting house:

The Cortelyou House, which stands [stood] on the Shore road, adjoining the military reservation at Fort Hamilton, was erected in 1699, by Simon Cortelyou, a French Hugenot, who had been banished from his native land. The building was occupied by American officers at the time of the arrival of Lord Howe and his fleet in Gravesend bay, on August 12th, 1776. On this day, the American troops to the number of three hundred, including two hundred Pennsylvania riflemen, opposed the landing of Lord Howe's men, and picked the Britishers off in rapid succession as they marched up the beach in front of the house. The fight lasted for several hours, and the Americans only retreated when heavy pieces from the warships were brought ashore and fired upon them.

When the Hessians gained possession of the field, Howe and his staff made the building their headquarters for nearly a month, and it was then that Catherine Cortelyou, a daughter of Simon, fell in love with one of the young British officers. The officer's suit was not regarded with favor by Simon, and when the former asked for his daughter's hand, he refused the request. Not to be daunted

by the objections of Simon, the young couple planned to elope. This they did one fine moonlight night on horseback. On their return to the Cortelyou house, Simon upbraided his newly-made son-in-law, and a stormy scene followed. The officer took the matter so much to heart that on the morrow of his marriage he went down to the beach, fronting the house, and put a bullet through his head. Catherine Cortelyou, according to the history in the Cortelyou family, went insane. At the close of the Revolution Simon Cortelyou was imprisoned for his inhuman treatment of American prisoners, he being one of the many Tories who infested Long Island.

Following Simon's death, the house fell into the possession of one Napier, who turned it into a tavern. When Napier died the house again passed into the hands of the Cortelyous, Simon, a son of the elder Simon, becoming owner. Young Simon by his marriage had three children; a daughter, Catherine; and two sons, Garret and Van Wyck. Catherine married Simon Garretson, of Gravesend. The wife of the second Simon was a Vanderveer, of Flatbush, and by this marriage he came into possession of a large tract of land in that town. When the Cortelyous left this historic structure, a family by the name of Stillwell took it, and after their departure it remained vacant until 1892, when it was purchased by the Federal Government. The house has since been torn down.

### Nicasius de Sille House

The 1912 calendar dealt with the Nicasius de Sille house, which formerly stood near the St. John's Lutheran church on the southeast corner of 16th avenue and 84th street, New Utrecht. (See reference to tablet in our last Annual Report.) The calendar says:

Nicasius de Sille, first councillor under Stuyvesant, came to New Netherland in 1653 with a commission describing him as an experienced and able statesman and soldier. He accompanied the Governor on his expedition against the Swedes in Delaware. Later he was Schout (Sheriff) of New Amsterdam and querulously complained against small boys playing "hoeckje" to the prejudice of quiet and good order.

Becoming Fiscal (*i. e.,* Attorney General) he was one of the founders of New Utrecht and has left in his own handwriting a "Description of the Founding or Beginning of New Utrecht," in which he tells of the erection of his house, shown on our calendar, as follows:

"Because they could not begin altogether and alike and for the purpose of setting a good example to the common people and

for their encouragement, the Lord Councillor and Fiscal Nicasius de Sille, Peter Buys, and Rutgert Jooster on the 8th of November, 1657, sent for the above-named Jacob Swart who was a master builder, for the purpose of having a house built and warranted completed in May, 1658. This could not be accomplished because the house of the Herr de Sille was designed to be 36 feet in length, but afterwards on the 31st of May, 1658, he directed 6 feet to be added, and this was the first house in the town which was covered with red tiles. It was, including the garden, enclosed with high palisades set close together."

Trouble with the Indians being feared in 1659, " the Fiscal then gave orders to fortify and surround his house, which alone had a tile roof, with palisades for the safety of the inhabitants and as a place of refuge, which immediately was done and finished." De Sille had a private armory and sold muskets to his townsmen at the reasonable charge of 8 guilders wampum. In 1660, the Fiscal ordered the erection of a Blockhouse and prohibited the use of the public supply of powder and lead in hunting.

" In the month of October of this year (1660) it came to the ears of the Fiscal that an individual had done amiss in the village, from which evil consequences were likely to flow. To punish evil doers, frighten the vicious and produce tranquility for the good, the Fiscal sent to the village half a dozen shackles with an iron rod and a good lock."

To his other activities de Sille joined the art of poetry, with what success may be gathered from the following extract, translated by the late Henry C. Murphy:

" The Earth Speaks to its Cultivators

" Mother of all I was; but little did they care
If what I might bring forth did ever breathe the air.
But heat and sunshine now — a bright and genial sky,
Infuse in me new life and nourishment supply;
And when I had no name, you gave the name to me
Of Utrecht, unrenowned, for my fertility.
An honor great this is, but bide my future fame;
I now am satisfied, by th' honor of my name,
By grain and orchard fruit, by horses and by kine
By plants and by a race of men — all growth of mine."

A tragic interest attached to this house, for to it General Nathaniel Woodhull, of Revolutionary fame, was taken from the prison ships to die.

The de Sille house stood for nearly two hundred years and at last fell down about 1850.

Our picture is from an oil painting made by Miss Ella M. Cropsey, a sister of Andrew G. Cropsey, formerly Justice of the

Peace and School Commissioner of the old Town of New Utrecht, L. I. The painting is now in the possession of Mr. Frank L. Van Cleef, to whose courtesy we are indebted for the opportunity of reproducing it. Miss Cropsey's painting was based upon a pencil sketch made about 1830 and is vouched for as a correct representation of the original.

### Erasmus Hall

The 1913 calendar gave a picture of Erasmus Hall in its old environment. The building still stands, as heretofore stated (page 271) on the east side of Flatbush avenue, between Church and Snyder streets. The calendar says:

The principal building shown on our calendar was erected in 1786 upon land at that time belonging to the Reformed Dutch Church of Flatbush. Among those who contributed to its erection were Alexander Hamilton, Aaron Burr, John Jay, Robert R. Livingston, George Clinton and James Duane. This structure now stands surrounded by the buildings and campus of the great High School which has been erected within the last few years and known as Erasmus Hall High School. The old academy held a high place among the educational institutions of this State and many students afterward distinguished in public life graduated from this academy.

At the extreme left of the picture is shown the gable wall of the old Dutch Church parsonage, occupied for many years by the Rev. Thomas M. Strong, and it was there he wrote his history of the town of Flatbush.

In the extreme background is seen Bateman Lloyd's grist mill, an odd contrivance, which long since disappeared.

### Lady Deborah Moody

The 1915 calendar gives a picture of the Van Siclen house at Gravesend, which, as we have already stated on page 274, is often erroneously called the Lady Deborah Moody house. This unfounded tradition concerning Lady Moody's occupancy of this building gives an opportunity, however, to recall the more reliable history of her connection with the Gravesend settlement, which is stated as follows on the calendar.

Whether Lady Deborah Moody ever lived in the building we picture on our calendar for 1915 is, to put it mildly, somewhat doubtful. There is tradition to support the claim that this was her home, but there is circumstantial evidence to the contrary.

However that may be, the house is there and though somewhat "restored" is a fine specimen of the houses of her time.

Lady Deborah Moody was the widow of Sir Henry Moody who died about 1632. She appears to have suffered from the oppression of the Star Chamber and finally determined to go to America.

In 1640, she went to Lynn, Massachusetts, and united with the church at Salem. The General Court made her a grant of four hundred acres and next year she purchased a farm for eleven hundred pounds. About this time she acquired, perhaps from Roger Williams or his followers, religious opinions at variance with those of her neighbors. At any rate, she was formally excommunicated for denying the propriety of infant baptism. Governor Winthrop, in writing of this, calls her a "wise and anciently religious woman."

For an independence thinker, Massachusetts was no more of a haven than England had been, so Lady Deborah went to New Amsterdam. It was her desire to return to Massachusetts, but this was forbidden by John Endicott "vless shee will acknowledge her ewill in opposing the Church & leave her opinions behinde her, ffor shee is a dangerous woman."

Unable to return to her possessions in New England, Lady Moody and her son and their associates obtained a patent to found the town known as Gravesend. She moved to Gravesend, and there she and the other colonists were compelled to defend her home against the Indians.

The first settlement made by Lady Deborah and her associates was laid out in the form of a square, bounded by the Village road. This plot was divided into four hollow squares and the outer part of each of these squares into ten "planters lotts." Each patentee is supposed to have received one of these plots, leaving one over for the church or school.

Radiating fanwise from this square were the larger divisions allotted to the original settlers, the main square being palisaded for protection against the Indians.

Lady Moody was on very friendly terms with Governor Stuyvesant, and when the colonists became disaffected with the Dutch rule, Stuyvesant went in person to Gravesend, staying at Lady Moody's house, and settling the matter by giving her the right to nominate the magistrates for Gravesend.

What makes this "dangerous woman" so interesting to us is the extraordinary measure of religious liberty she was able to obtain under Dutch rule for her settlement. As the patent of 1645 puts it, Gravesend was "to have and inoye the ffree liberti of Conscience according to ye Costome and manner of Holland without molestation or disturbance from anye madgistrate or

madgistrates, or any other Ecclesiasticall minnister that maye prtend jurisdiction over them, with liberti likewise for them the said pattentees thyre associates heyres etc; to erect a bodye pollitique and Civill Combination amongst themselves as free men of this province and of the towns of Gravesend, and to make such Civill ordinances as the maior parts of ye inhabbitants ffree of ye sd towns shall thincke fitting for theyr quiet and peaceable subsisting."

Tradition points out a nameless headstone in the old Town cemetery as marking the last resting place of this pioneer of liberty.

### First Dutch Church of Brooklyn

The 1916 calendar depicted the fourth edifice of the First Dutch church of Brooklyn, which stood upon the site of what was once known as Murphy park, back of the Brooklyn Borough Hall. The historical matter reads as follows:

The history of this church organization really dates back to 1654, though the first dominie was not called until six years later. On September 7th, 1660, Dominie Henricus Selyns was duly presented to his congregation by Nicasius De Sille (whose home we pictured on our calendar for 1912) and Martin Krigier, burgomaster of New Amsterdam.

A letter of the Dominie written about a month after this informs us that he was preaching in a barn, but hoped soon to have a church erected, although, as he remarks, " Breuckelen needs more wealth."

His congregation, however, was not able even to pay his entire salary, but Gov. Stuyvesant came to their rescue, and the dominie's salary of 600 florins was paid.

In 1661 Carolus De Bevoise was appointed chorister and schoolmaster to assist Dominie Selyns. The building of the Home Title Insurance Company of New York stands on what was once part of the farm of this first schoolmaster of Brooklyn.

Not until 1666 was the congregation able to erect a church. This first church, as well as the second, erected just a century later, stood in the middle of the road that afterwards became Fulton street, between the present bridge and Lawrence street. On one side of the road was the old burying ground of the church, which, in 1869, was sold to Andrew S. Wheeler. The store of Abraham & Strauss now stands on this plot. A drawing made in 1808 well preserves the appearance of this second church, whose small Dutch stained-glass windows gave so little light that it was impossible to read after four o'clock in the afternoon, even in summer time.

A third church building was completed and dedicated in December, 1807. This stood upon the site shown in our picture, unofficially known as "Murphy Park," back of the Borough Hall. The church prospered, and, outgrowing its third building, planned the erection of a fourth.

Gen. Jeremiah Johnson was appointed chairman of the building committee, the other members of which were Leffert Lefferts, Samuel Smith (after whom Smith street was named), John S. Bergen, John Skillman, Garret Bergen, Theodorus Polhemus (a descendant of that Dominie Polhemus who preached at Breuckelen before the call of Dominie Selyns) and John Schenck. The corner stone of this fourth building was laid on May 22nd, 1834, and the building finally dedicated on May 7th, 1835. The classic effect produced by the front of the building may be readily understood when it is known that it was copied from the Parthenon.

As early as 1792 the English language had occasionally been used in some services, but it was not until the death of Dominie Martinus Schoonmaker, in 1824, that the use of the Dutch language entirely ceased. It may be of interest to note that even as late as 1840 Dutch continued to be the familiar speech of the older generation, especially in Flatbush.

Brooklyn kept on growing, and when, in 1886, the church found that it could obtain a quarter of a million for the land that it had bought for eight hundred and fifty dollars, the fate of this building was sealed.

The new County Court House will cover this site.

The fifth and present church building stands on Seventh avenue and Carroll street.

Our picture is taken from a photograph made in 1871 by Mr. William S. Pendleton, then and until his retirement, a few years ago, one of the leading photographers of Brooklyn.

### Crommelin House

The 1917 calendar gave a picture of a stately colonial mansion, with four Ionic columns supporting the roof of its two-storied portico, which once stood on the east side of Flatbush avenue, about a block north of Clarkson street. The description is as follows:

The beautiful house shown in our picture was built for Robert J. Crommelin, in 1835, on land on the east side of Flatbush avenue, about 200 feet north of Clarkson street, in Flatbush, New York. Twenty years later the Honorable Cornelius S. Bogardus, a prominent politician of the time, owned and occupied the place. Later, the building became a roadhouse. Three times the property was sold in foreclosure proceedings.

In 1862, William Brown, Esq., became the owner through deed from Anthony F. Campbell, Sheriff. Mr. Brown found his greatest pleasure in the improvement of his property and, in his day, it became the "show place" in Flatbush. He was generous in sharing with others the delights of his garden and conservatories, and those who once met him could not forget the genial old gentleman.

Mr. Brown was the first president of the Flatbush Trust Company and headed the commission which laid out our wonderful Shore road.

Mr. Brown died at his home in January, 1905, and a few years later the building was destroyed to make way for the commonplace "improvements" of the present day.

## OLD GRIST MILL AT ROSLYN, L. I.

### Converted into a Museum

An interesting announcement appeared in the New York *Herald* of August 5, 1917, concerning the preservation of the ancient grist mill at Roslyn, L. I. From the earliest days of Roslyn, which is on the north shore of Long Island about 12 miles from Oyster Bay, there has been a grist mill where the waters from a lovely little lake fall into the headwaters of Hempstead Bay. The mill belongs to one of the numerous Hicks families of the neighborhood. Mr. Isaac Hicks next door has a general store and other members of the family have old fashioned houses bordering the water, many of them containing relics of bygone days. In recent years the old mill fell into disuse and the exterior presented a dilapidated appearance to the motorists who passed it, with little thought for the work it had done in its day and the importance it had enjoyed.

Through the efforts of the Neighborhood Association of Roslyn, the mill has been renovated. Its heavy beams, with the wooden pegs which hold them together, were perfectly stanch. The old clapboarding was removed and in its place was put concrete, which perfectly imitated the weather stained appearance of the wood and had the added advantage of being weatherproof and fireproof. The ancient millstones were preserved as curiosities, and to them were added other outgrown household and manufacturing utensils, heirlooms lent by families established in the neighborhood for generations, and more general objects of interest lent by collectors.

The result has been an extremely interesting museum containing relics recalling the history of Long Island, the State and the nation.

The Museum Committee consists of Mrs. Thomas Hastings, Miss Rachel Hicks, Miss Titus and Miss Jessie Mann. Messrs. Harold Godwin, E. C. Brower, J. N. Love, C. H. Mackay, W. D. Straight, William Pickering, Isaac Hicks and Henry D. Walbridge are among the directors of the Neighborhood Association.

## FORT SALONGA, LONG ISLAND

### Renewed Movement for its Preservation

In the month of February, 1918, our attention was called to an interesting landmark of the Revolution on the north shore of Long Island called on the map Fort Salonga, but more properly spelled Slongo. Baylee, in his history of Suffolk County (page 186), says that Slongo is an Indian name.

Fort Salonga is about 2½ miles or three miles east of Northport and one mile south of the shore of Long Island Sound, in the northwestern part of the town of Smithtown. It is three miles northwest of Kings Park station on the Wading River branch of the Long Island Railroad, and is 40 miles from Brooklyn. It lies about midway between Northport bay on the west and Smithtown bay on the east.

Fort Salonga was captured from the British by the Continental troops under Col. Benjamin Tallmadge on October 3, 1781. About eleven months before, Col. Tallmadge had conducted an equally successful raid on Fort St. George, which stood on Smith's Point on the south side of Long Island on the borders of the Great South Bay. On that occasion he crossed from Connecticut to the north shore of Long Island with eighty men in eight whaleboats, marched across the island, and captured the fort on November 23, 1780.

Concerning the capture of Fort Salonga, Henry Onderdonk, Jr., in his "Revolutionary Incidents of Suffolk and Kings Counties" (page 105), says that "there was a garrison of 140 men, chiefly woodcutters, well armed at Fort Slongo, Treadwell's Neck, 8 miles E. of Lloyd's Neck;" and he quotes from Col. Tallmadge's journal, as follows:

"On the evening of Oct. 2, '81, 9 o'clock, I embarked from Saugatuck River part of my detachment, and placed Major Trescott at the head of it, with orders to assail the fort on a particular point. The troops landed on L. I. by 4 o'clock, and at dawn of day the attack was made and the fortress subdued. The Blockhouse and other combustible materials were burnt, and the troops and prisoners returned in safety, bringing off one piece of handsome brass field artillery.

"Gen Washington congratulates the army on the success of the American arms in the reduction of Fort Slongo on the morning of Oct. 3, without the loss of a man, and only one wounded. Of the enemy, 2 Capts., 1 Lt., and 18 privates prisoners, besides several killed and wounded and 2 iron double-fortified 4 pounders destroyed. The colors of the Fort, a brass 3 pounder, a number of small arms, ammunition, &c., are the trophies of the victory."

To the foregoing quotation, Onderdonk adds the following comment:

Henry Skudder was furnished by a neighbor with a draft and description of Ft. Slongo, on the high land near Smithtown river. With this in his pocket, in making his way to his boat (hid in a swamp) his course lay through a forest, in the middle of which was a clear field by which ran the road from Smithtown to Fresh Pond. Just before sunset he heard the tramp of horses; he hid behind a large fallen tree, under which he could see 50 or 60 light horse passing within 10 rods of him. He was not noticed and escaped to his boat.—Ed.

About 28 years ago, Mr. Orville B. Ackerly of New York City, as a broker, acting for the executors of Doctor Timothy Matlack Cheeseman of New York, sold the farm on which Fort Salonga is situated to Mr. George S. Longbotham of the town of Smithtown. At that time, on Mr. Ackerly's suggestion, Mr. Longbotham assented to the conveyance of the fort to the Suffolk County Historical Society, whose headquarters are at Riverhead, but did not carry out his generous intention on account of that Society's inability to take title to real estate.

It is possible that the new movement for the preservation of this interesting landmark may result in its being placed beyond the vicissitudes of private ownership.

## WASHINGTON'S HEADQUARTERS IN NORTH CASTLE

### Purchased by Westchester County

Pursuant to chapter 247 of the Laws of 1917, the Supervisors of Westchester county purchased the Washington Headquarters property situated in the town of North Castle, just north of White Plains. The property is known as lots Nos. 288, 289, 290, 291 and 292, as shown on " map No. 2 of Washington Headquarters, town of North Castle, Westchester county, New York." This action is a matter of congratulation to all who had a part in preserving this interesting landmark.

The White Plains chapter of the Daughters of the American Revolution had long desired the preservation of this building and when, in the latter part of September, 1916, it was reported that certain parties were contemplating the purchase of the house for a " tea-house," they took definite action by securing an option on the property for one year for $100. The chapter then petitioned to the Board of Supervisors of Westchester County to buy it, with one acre of ground, but the proposal met with active opposition at first and was lost by a vote of 19 to 17. The matter was reconsidered later, however, and was approved by a vote of 36 to 3.

The county took title to the property on July 2, 1917. The price paid was $5,000. On August 6, 1917, the Board of Supervisors appointed as custodians a Board of Governors consisting of Mrs. Jeremiah T. Lockwood, Regent of the White Plains Chapter, D. A. R.; Mrs. Edward M. West, Vice Regent; Mrs. Frank V. Fowler, Corresponding Secretary; Mrs. Frank L. Park, a member of the chapter; and Messrs. Henry R. Barrett, Frederick S. Barnum and Stephen Holden, all of White Plains.

The house was opened to the public and formally dedicated on October 27, 1917, with exercises under the auspices of the White Plains Chapter, D. A. R.

The county of Westchester provided no funds for the restoration of the building, but gave the D. A. R. Chapter permission to do so at its own expense. The restoration was therefore effected by means of moneys raised by private subscription and the work of renovation was done under the supervision of Mr. Alexander McMillan Welch, a member of the Board of Trustees of the American Scenic and Historic Preservation Society, who gener-

ously gave his services as consulting architect in this matter, as he had previously done in the restoration of the Dyckman house in New York City.

Mrs. Lockwood informs us that in the course of the work, the modern partitions have been removed; the ceilings and side walls that covered the old hand hewn timbers and woodwork have been taken down; the old time doors and windows have been fitted with locks and latches again; and the fireplaces have been uncovered and made ready for use. The old Dutch oven in the kitchen, the milk room and the small bedroom on the ground floor could not be restored as these rooms seemed the only ones suitable for the caretaker's use. It is hoped that in time a lodge will be built for the caretaker and that these interesting rooms will be opened to the public. A small porch and an addition of forty years ago have been torn down; the entire house has been painted and the yard cleaned up, so that the property is already quite transformed from its recent dilapidated condition. Further improvements are planned as funds become available.

## CROTON POINT

### Property Sold — Park Plan in Abeyance

The existing war conditions have not been favorable for the consummation of our plan, mentioned in our last Annual Report, for the creation of a park on Croton Point. In the spring of 1917, a suit to foreclose a mortgage (of $100,000 we are informed) on the property was begun, and the property was bought in by a syndicate at a price stated to be $141,000.

For the reasons stated in our last Report, we had hoped that means might be found for acquiring Croton Point,— so interesting historically, and so remarkable in its scenic situation,— for a great public park, and we do not yet despair of the realization of the project in some form.

## MOHANSIC LAKE RESERVATION

### A New State Park Established

On March 12, 1918, Hon. George A. Slater of Port Chester introduced in the Senate a bill (Introductory No. 858) and on March 13 Hon. William F. Brush of Newburgh introduced in the Assembly a corresponding bill (Introductory No. 1026) entitled "an act to amend the Public Lands Law, in relation to the establishment of a State reservation at Lake Mohansic, in the town of Yorktown, Westchester county, creating a commission for the management thereof and making an appropriation for the purposes of this act."

This act provides for the solution of a question which has greatly disturbed the city of New York. Pursuant to a law enacted in 1907, the location of two institutions, namely, the Mohansic State Hospital and the State Training School for Boys, on the Croton water-shed was authorized, and about 1,100 acres were acquired for the purpose at an expense of approximately $1,000,000. As the work of erecting these institutions progressed, strong opposition to their location on the water-shed from which the city of New York draws its water-supply developed. A leading part in this opposition was taken by the Merchants' Association of New York under the leadership of its Committee on Pollution, of which Mr. Edward Hatch, Jr., is chairman. The fight against the location of these institutions on the site selected was based on the danger to the health of the people of New York City. At first there was a strong reluctance to abandon the plan for the State institutions, but as the campaign of education progressed, prominent officials came to appreciate the gravity of the situation. Senator Robert F. Wagner was sponser for several bills calculated to safeguard the water-shed. Mayor Mitchel gave his support to various protective measures, and Gov. Whitman showed his sympathy early in the controversy by declaring that as long as he was Governor the work to complete the Mohansic State Hospital would not be authorized.

For a year past, a committee of the Legislature, of which Senator Slater is chairman, has been investigating the subject, with the result that in March, 1918, the bill above mentioned was introduced. The act provides that the lands of the State in the town

of Yorktown, Westchester county, heretofore acquired for the Mohansic State Hospital, and the lands of the State in such town, heretofore acquired for the New York State Training School for Boys, with all the appurtenances thereto including the railroad and railroad right-of-way and sidings shall together be known as the Mohansic Lake Reservation. Jurisdiction and control of the reservation is transferred to a board of five commissioners appointed by the Governor, by and with the advice and consent of the Senate, for overlapping terms of five years each.

The act provides that the reservation " shall forever be reserved by the State for the purpose of preserving it in its natural condition and kept open and free of access for all mankind without fee, charge or expense to any person for entering upon or passing to or from any part thereof."

In the enumeration of the various powers of the commission, it is evident that the authors of the act had in mind a very wide and beneficial use of the park. The commission can establish places for the service of food and drink. They can lay out and maintain golf courses, base-ball grounds, children's play-grounds, and other places for recreation and amusement. Permission may be granted to the managers of the Society for the Reformation of Juvenile Delinquents now located on Randall's Island to use a part of the reservation south of Lake Mohansic for agricultural purposes, provided not more than fifty individuals shall be lodged on the land at one time. For the housing of those fifty persons, the four stone houses now partially completed near the unfinished power plant may be finished. The power plant building is to be completed for use as a dairy; and the three stone structures being erected for the housing of sixteen inmates in each building, situate upon the crown of the hill, close to the Mohansic lake, are to be finished and used for manual training work only.

Provision is made in the act for the augmentation of the park by gifts of real or personal property.

The act abolishes the Mohansic State Hospital and the New York State Training School for Boys.

The establishment of this great State park, if the bill is enacted, will be a cause for congratulation to the people of the State in general and particularly to those of the southeastern part of the

State, where over half of the population lives. It removes a serious menace which threatened the health of the city of New York, and provides the first large State park east of the Hudson river south of Bennington Battlefield (*q. v.*). As a place of recreation, it will eventually prove of great value.*

## HUSTED MEMORIAL AT PEEKSKILL

On July 4, 1917, a bust of the late Gen. James W. Husted, placed upon the Husted memorial shaft in Depew park, Peekskill, N. Y., was dedicated with notable ceremonies. The Hon. Leverett F. Crumb, President of the village of Peekskill, concluded his address by saying:

"We accept as the first work of art erected in a public place in Peekskill, the work of that distinguished artist, Charles A. Heber.

"We accept it as a just tribute to the memory of one whom Peekskill loved to honor and who loved to honor Peekskill.

"We accept it in its enduring form, that generations yet unborn may come to this spot, learn of the unselfish life of General Husted, learn what an impress he made on his day and generation; learn as was taught nineteen hundred years ago by the only just and perfect one, that he lives best who loves and serves his fellow men."

## PALISADES INTER-STATE PARK

### The Highland Forest Reserve Recalled

At the meeting of the New York State Forestry Association held at Lake Placid during the week ending Saturday, September 8, 1917, Dr. Edward L. Partridge, a member of the Palisades Interstate Park Commission and a Trustee of the American Scenic and Historic Preservation Society, read a paper on the subject of the Palisades Inter-state Park, the substance of which we are permitted to reproduce herewith. It contains a condensed review of the history of the park and of its development to the present time, and recalls certain efforts for the establishment of a forest preserve on the east side of the Hudson river.

"The acts of the State Legislatures of New York and New Jersey state that the Palisades Interstate Park Commission is

* The bill was passed by the Legislature and became chapter 543 of the Laws of 1918 by Governor Whitman's signature, May 8.

designed 'for the selection, location, appropriation and management of certain lands along the Palisades of the Hudson river for an Interstate Park and thereby to preserve the scenery of the Palisades,— and for the extension and improvement of lands in the Counties of Rockland and Orange for Park purposes.'

"The subject of which I speak may not appear to have a proper place in the deliberation of a Forestry Association, but I am hoping before I complete my remarks that my hearers will find the justification.

"Eight years ago, in 1909, a bill was taken to the Senate and Assembly of the State of New York, by me, which proposed 'To create a forest reservation in the Highlands of the Hudson river, to be known as the Highlands of the Hudson Forest Reservation, to provide for its regulation, and making an appropriation therefor.'

"Mr. Edwin A. Merritt, Jr., of Potsdam, well known to the residents of the Adirondack region, spent half an hour over it, and then said 'I will introduce this bill in the Assembly.' Mr. J. Mayhew Wainwright of Rye presented it to the Senate.

"The area proposed by this act was about one hundred and twenty-five square miles, and excepted from its provisions water supply requirements of villages, and rights of the United States Government at West Point, and lands suitable for residential and home purposes. The control was to lie in the Forest, Fish and Game Commission, now known as the Conservation Commission. One interesting provision was as follows:

"'It is hereby made the duty of the said commission to preserve, care for, lay out and improve the said Forest Reservation, and to superintend and control the cutting of timber upon the lands included within the boundaries described in the first section of this act, both public and *such private lands* as are suitable for the growth of timber only, to the end that the forest and timber upon such lands shall be protected and the growth thereof encouraged, and to protect and preserve the same from forest fires.'

"About this time, Mr. Gifford Pinchot, of the National Forestry Bureau, and Mr. James S. Whipple, of the New York State Commission, were presenting to the public strong evidence that ruthless and indiscriminate cutting and destruction of the nation's woodlands, if continued as in the past, must lead to timber famine within twenty-five years.

"This bill passed both houses and was signed by Governor Hughes. Mr. Whipple immediately took charge, and Mr. Frank F. Moon, now Professor in the Syracuse University, was installed in immediate charge as local Forester. This, I believe, was the *first* application of the police power of the State upon indiscrimi-

nate and wasteful cutting of timber upon lands *privately owned* and the first recognition of the suitability of such application on the part of national and State governments.

"To increase general safety and advantage to those who use the highways and roads was, at a remote period, the reason for the application of the police power of the State to direct that drivers, on meeting and passing each other, should turn to the right. Doubtless there were those who then protested at such dictation. Does anyone question this now? To-day, more than ever in the history of the world, do we not recognize the propriety and requirement of government intervention, the application of a police power, as conditions demand it?

"Give, therefore, to the park idea in behalf of the Highlands of the Hudson a justified relation to the cause of forestry for this *initial* step in forest conservation.

"For a year following, under the direction of Professor Moon, thorough examination and discriminating mapping of this reservation proceeded, and educational efforts were undertaken by use of lantern slides with the oil lamp, and talks among the mountaineers, under adverse and trying conditions in these back woods. A campaign of education in behalf of conservation of timber was carried on, at the same time, with every effort to demonstrate the value of such discriminating cutting as would make the region valuable to these choppers, who were sometimes owners as well, in the development of a region especially attractive to any buyer seeking a large estate. For one hundred and fifty years, timber had been treated as grass is mowed, with all the attendant destructive results to the land,— so well known to all of you,— and never did re-foresting take place. This was a true 'cord wood country,' and the ignorant and predatory, who perceive the present moment only, bought land at five to ten dollars an acre, cut every tree to the ground, abandoned the land,— payment of taxes never being made,— all for an immediate and *meagre* financial return.

"No region could have served better to instruct large numbers of those of our State population who were uninformed or thoughtless, upon the correct and conservative treatment of forest land, for, bear in mind, that its location was within forty miles of the largest city in the United States, and therein was to be a great and accessible object lesson.

"Now I pass to an interesting and closely related story. During the two or three years of work upon this proposition, I learned that the late Edward H. Harriman, who loved the Highlands, had become personally familiar with them, and had acquired large tracts therein, had in contemplation that this same area, near the city of New York, must be made, some day, into a great park as

a resort for people of all classes living in and near the city of New York. He had been kept familiar with the progress of the work as described, and had expressed his approval, feeling that it prepared the way for the carrying out of his intentions. He had practiced forestry upon his own adjacent lands, and fully appreciated its importance.

" After his death, Mrs. Harriman, possessing the same love of these Highlands, thoughtfully and as a memorial, proceeded to the completion of that of which he had thought and dreamed. From his estate, she offered to the State of New York, in 1910, as a gift, ten thousand acres of land and one million dollars. Generous givers added to this a million and a half dollars, and the State met these gifts by a bond issue of two and a half million dollars. Rather than create a new Park Commission, bills were passed by the Legislature to enable the Palisades Interstate Park Commission to take jurisdiction over these lands, to which more was to be added by purchase.

" These lands in the Highlands of the Hudson afforded opportunity for many and various uses, including of course that of forestry development; but with two controls,— one the forest reservation under the Conservation Commission, and the other being the Interstate Park,— covering, as they would have done, *the same lands,* the act which created the forest reservation in the Highlands could not have worked satisfactorily, and was repealed.

" Just here I must state briefly the story of the Palisades Interstate Park Commission. In 1895, Mr. George W. Perkins, perceiving the progress of destruction by quarrying of the interesting, rare and beautiful feature of the Hudson River scenery in the fourteen miles of trap rock constituting the Palisades, boldly took the initial step towards their protection. These fourteen miles of unique river scenery began in New Jersey, above Fort Lee, directly opposite the City of New York, and continuing uninterruptedly, were then privately owned. Today, all but six hundred feet of these Palisades is owned by the States of New Jersey and New York, and secure for all time as an asset of unusual beauty to our wonderful Hudson River scenery. New York is as much,— if not more,— interested in this, for while the Palisades are in New Jersey, New York looks at them. In 1900, a permanent body known as the Palisades Interstate Park Commission came into existence. This consists of five members from New York and the same number from the State of New Jersey, appointed by both Governors.

" The developments of the Palisades Interstate Park, as they exist today, are the Palisades region, where, with a background of rock foundation for fourteen miles, lies seven hundred acres,—

the rock formation being unbroken and rising 350 to 500 feet. Natural bathing beaches have been further developed by adding crusher screenings so that at one of these alone, the average daily attendance was eight hundred, principally mothers and children, with an average of fifteen hundred on Sundays and holidays, and this in the summer of 1916 when, because of poliomyelitis, quarantine of several adjacent boroughs greatly reduced the number of visitors. Docks exist to the number of fourteen, which permit the landing of those coming from the city and from the east side of the Hudson river, and there are basins for motor boats. Extensive playgrounds have been made through the placing of retaining walls.

"A ferry company, running boats from Dyckman Street, New York City, brings, on a ten minute schedule, to the Palisades at Englewood, large numbers of foot and automobile visitors. Here, a perfect automobile road, one and a half miles long, climbs to the cliffs,— another being under construction five miles further up the river, and between these, for this distance of five miles, an 'automobile trail' is nearly finished. This road furnishes a very extraordinary view of the Palisades from below.

"The Commission's forestry department has been active. Dead and broken trees, brush and debris have been removed or burned, much good timber removed and prepared in our saw mills for dock building and other purposes, while spruce, white wood, locust and pine have been planted extensively, all an object lesson to be seen by many thousands who would fail to understand through didactic instruction. This long though narrow strip contained a small forest of untouched and very large and vigorous growth.

"Here, camping by working men and boys is encouraged through the small charge for sites, and large numbers are kept from city streets, who embrace an opportunity for a life, healthful to body and morals. For the development work in this Palisades region the State of New Jersey contributes five hundred thousand dollars.

"Bluefields, near Nyack, in New York, with six hundred acres, formerly an unsatisfactory State rifle range and now given to the Commission by the State of New York, affords a fine camping area for young working women. It is difficult to keep up with increasing demands here. At this situation there has been planting.

"In the Hook Mountain section, after protracted condemnation proceedings, the Commission has acquired all of the seven hundred acres which were quarry properties. The elevations above the river are 600 to 800 feet, with river facing, and will require time for the disfiguring results of the past to disappear. Park development is planned and will follow.

"The Commission's greatest area,— of twenty-seven thousand acres,— lies in Rockland and Orange counties, and has been made possible through appropriations from New York State of five million dollars, and gifts to the same amount from individuals, a total of ten million dollars, and by Mrs. Harriman's original gift of ten thousand acres of land. This area of wood land has been described briefly, already.

"In this section are nine mountain lakes, and three more under construction. Of highways, second to none in the State, are eighteen miles, and one hundred and thirty miles of trails. Campers numbered 45,000 during the season of 1917, finding the lakes affording benefit and pleasure. The permanent residents are few in number.

"Upwards of three million of trees have been planted after suitable preparation for them. Fire protection is thorough, with observation stations, patrol and telephone. The mountaineers (who everywhere possess a code of their own) have been won over.

"What is known as the Bear Mountain Inn, a self-sustaining day resort on a site which was once intended for a State prison to replace Sing Sing, commands an unsurpassed Hudson river view. On one day during the summer of 1917 the Bear Mountain Inn and immediate surroundings, which include Hessian Pond and the sites of Forts Clinton and Montgomery, were visited by 4,700 automobiles, and 20,000 individuals from boats. Hessian Pond, a beautiful mountain lake, derives its name from the fact that the bodies of Hessians who were killed during the attack upon the American Forts, Clinton and Montgomery, by the English in October, 1777, were thrown into this water as a more simple disposition than that of burial.

"Furthermore, it is interesting to know that at Fort Montgomery, in April, 1777, George Clinton received notice of his election as the first Governor of the State of New York, and that the fort was, essentially, the first 'Executive Chamber' of our State.

"The Highway Department of the State of New York recognizes aid from the Commission in connection with the roads built by it, the six hundred foot steel arch bridge,— 140 feet above the river,— known as 'Popolopen Bridge,' and the condemnation proceedings which make the Storm King Road possible. With the completion of this piece of road, from West Point to Cornwall, a direct highway communication will have been accomplished between New York and Albany upon the west side of the Hudson river, which will view the river four-fifths of the distance between New York and Albany.

"In closing, I again allude to the services which the Palisades Interstate Park Commission has rendered to the cause of forestry, and to the Adirondack region. Because of allied interests, 'Proposition Number 1' was voted upon in the State of New York, in November, 1916. This was a proposition 'to issue State bonds to the amount of Ten Million Dollars for the acquisition of lands for State park purposes,— seven and one-half million dollars, to be used for the extension of the Adirondack and Catskill Parks of the Forest Preserve under the direction of the Conservation Commission; the remaining two and one-half million dollars to be expended for lands to be acquired by the Commissioners of the Palisades Interstate Park.' Voters in New York City and immediate vicinity brought to this a majority of 260,000, which majority was reduced to 151,000 by the vote elsewhere through the State,— and, it is true that no Adirondack county gave a majority in favor of this bond issue.

"To popularize a Cause, to make it generally intelligible to the common people, in connection with the pleasures of life, is an asset in the popular vote.

"I venture to say that, to use the language of Forestry, the work of the Commission exhibits 'young and vigorous growth.'"

## KNOX'S HEADQUARTERS, NEW WINDSOR

### Renewed Efforts for its Preservation

In our Annual Report for 1915, at pages 239 and 240, we gave an account of the unsuccessful effort to secure the passage of a bill for the preservation of Gen. Knox's headquarters near Vail's Gate, in the town of New Windsor, Orange county; and on plate 44 in the same volume gave a picture of this interesting building.

In 1917, a committee of which Mr. William H. Harris of Newburgh is chairman and Mr. Walter C. Anthony is secretary, started a movement to raise $7,000, of which $6,000 was for the purchase of the property and $1,000 for restoration of the building. The building and 47½ acres of land were reported to be purchasable for $2,000 paid down and $4,000 on mortgage. The committee is a volunteer organization composed of members from Newburgh, New Windsor and Cornwall. In their appeal for funds they said:

"In this day of quickened patriotism, whatever speaks to us of the marvelous loyalty which created our nation is doubly eloquent. Few places in the whole land are so full of memories of Washington and of the brave officers and lovely women who gave their

gracious leadership to the Revolutionary movement. We are now defending our noble commonwealth. But these men and women founded it."

The American Scenic and Historic Preservation Society is in most hearty sympathy with this appeal, and wishes the committee the utmost success. It regrets that the limitations of its treasury prevent it from giving more than moral support.

The building is an interesting specimen of domestic architecture of the colonial period. But it is in a sad state of disrepair. The piazza has fallen in and the roof needs renewing immediately if the building is to be saved from rapid decay. Properly repaired and cared for, however, it will last for centuries. It is eligibly situated at a bend in the highway, and has a picturesque natural environment, including a pretty little glen.

We are informed that the one-story wooden portion of the house was built in 1734 and that the two-story stone part was built in or about 1750. It was erected by (or for) a New York merchant named Ellison. One of the same family erected the residence in New Windsor Village, near the river shore, which was used by Washington as his headquarters. Ruttenber in his history of the Town of New Windsor says of the Knox House:

"It was occupied at different times by General Knox — in 1779–80* and again in 1781–82. General Green and Colonels Wadsworth and Biddle were also quartered here; and ultimately — in 1782–83 — it was the headquarters of Major General Gates who was then in command of the cantonment."

Chastellux mentions the place twice. Once on Dec. 19, 1780, he met Washington and Mrs. Washington in their carriage going to visit Mrs. Knox, "whose headquarters were a mile further on near the artillery barracks." Again in 1782 (Dec. 7) he says:

"After viewing the barracks I regained the high road, but passing before General Gates' house, the same that General Knox inhabited in 1780, I stopped some time to make a visit of politeness."

Among the traditions of the house is one related by Ruttenber to the effect that "Washington is said to have opened a dance here with Maria Colden who is said to have been a daughter of Cad-

* This may be a mistake for 1780–81.

walader Colden, Jr., of Coldenham, at a party given by Mrs. Knox." A similar statement is made by Lossing in his Field Book of the Revolution. Mr. Walter C. Anthony of Newburgh doubts the authority of this tradition and says:

"Not long before the time spoken of Cadwalader Colden (2nd) had been in jail at Kingston for disloyalty. If Washington danced with the daughter of such a notorious Tory sympathizer it must have been to show that he harbored no ill will against his enemies' children. He was too good a politician not to know the standing of a lady with whom he danced. I might add that the Ellisons were also in sympathy with the British cause and there was a close connection by marriage between them and the Coldens."

There is so much of intense interest that is authentic about the house that the questionable legend of Washington's dance with Maria Colden can be spared without weakening the argument for the preservation of the landmark.

## SCHUYLER MANSION AT ALBANY

### Formal Opening Exercises

The Schuyler Mansion at Albany was formally opened to the public with appropriate exercises on Wednesday, October 17, 1917, at 2:30 P. M. A full account of the proceedings will be found in Appendix C of this Report.

In our Annual Report for 1911, we recorded the enactment of chapter 38 of the laws of 1911 authorizing the acquisition of this historic property, and in our Report for 1912 we gave an extended historical account of the building by Miss Georgina Schuyler.

The State took title to the property in 1912, but the former occupants were allowed to retain possession until January 1, 1913. Since that date, an important work of restoration has been performed. The modern excrescences of the building have been removed and the building itself put in good condition. A detached cottage for the janitor and heating plant has been built in the southeastern corner of the grounds. The thicket of shrubbery and the board fence which formerly obscured the view of the house from the street have been removed. And the entrance gate has been shifted to a more eligible and attractive site. All of these

changes have contributed to restore the building to its colonial appearance and to enhance its noble setting on the top of the hill.

## SHEPARD MEMORIAL AMPHITHEATRE

### Dedicated at Lake George, September 2, 1917

The Shepard Forum, or open-air amphitheatre, erected in memory of the late Edward M. Shepard in Shepard park, at Lake George, N. Y., was formally dedicated on September 2, 1917. Hon. George McAneny of New York City presided, and among the other speakers were Mr. Edwin J. Worden, Chairman of the Park Committee; Dr. John H. Finley, State Commissioner of Education; Mr. Francis Lynde Stetson of New York; Hon. George Foster Peabody of Saratoga Springs; and Rev. Edward M. Parrott, rector of St. James Episcopal church of Lake George.

Two particularly graceful passages in Dr. Finley's speech were as follows:

"I remember a few Sundays after Mr. Shepard's death, in walking from the College of the City of New York* in the upper part of Manhattan, to his grave over in Brooklyn. I started out with a great handful of flowers, but on my way through the east side the children in the streets, who seldom see flowers and perhaps never have them, asked for them one by one, and when I got to the grave I was empty handed. But I thought it was, after all, as he would have it, and it was but an illustration of his bringing even into the poorest streets of New York the most precious gifts men can carry.

"In these days, when the deeds of the soldiers invite the praises of every land, I like to recall the remark of one of Mr. Shepard's teachers, treasured by one of his classmates. Commenting on this young student's exceptional work, the teacher said, no doubt thinking of some new heroism reported by the day's paper, for it was in the midst of the civil war, 'For Shepard, you know, is quite a hero in his way.' Yes, a hero in his way, and a noble, glorious way in the battles of the kingdoms of the mind, on whose field he died unvanquished and to whose scenes he returns a man of Hesiod's golden race."

* Of which Dr. Finley was then President.

Mr. Peabody read the following poem, written for the occasion by Mrs. Spencer Trask:

On the historic shores of Horicon —
Storied with legends of the long ago,
And sacred with traditions of today —
There lies a park of mossy loveliness
Embowered in verdant foliage. The Lake
Ripples in sparkling beauty at its foot
In ever varying, ever changing hues —
Bright morning blue, deep sapphire, shadowed gray,
And close upon the border of the beach
An Open Forum stands amid the trees;
It stands encircled by the winds of heaven,
Roofed by the sky, and carpeted with flowers;
The lofty mountains are its sentinels.

To this fair, spacious Forum we have brought
To lay upon the shrine of memory
An interwoven wreath of many leaves,—
Ivy and laurel, amaranth and bay —
Memorial of him who was, in one,
Scholar and statesman, patriot and friend.

He was a scholar who had studied life,
And daily learned new wisdom from on high;
Whoever held, in this confusing day
Of random rush, an academic calm —
Yet still with progress kept his virile pace;
Who measured men and public enterprise
By classic, as by modern measurements;
He knew the best in both and took that best
With quick discernment and deliberate thought.

He was, indeed, a statesman — he foresaw
The far off vision of great things to be,
And strove to bring it near; with vital words
He called on men to follow the far gleam;
And warned them also of impending ills.
He knew the fatal rocks and shallow shoals,
But steered his course by the clear star of faith.

He was a patriot — he put aside
His own advantage for the sake of truth;
Foregoing splendor of proud palaces.
He was content to build protecting dikes
Against the inrush of disastrous tides.

He was a friend — he knew great friendship's heart!
No man, no woman unto whom he gave
The shining crown of friendship, can forget
His chivalry, his courtesy, his care,

His lavish generosity which showed
All honor, all preferment to the friend
And asked only to be allowed to serve.
That friendship is a living memory,
Too deep for tears, too eloquent for words.

## MACDONOUGH MEMORIAL AT PLATTSBURGH

### Markers for Historic Sites

On February 4, 1918, the Hon. Wallace E. Pierce of Plattsburgh, N. Y., introduced in the Assembly a bill (Introductory No. 354) appropriating $25,000 for the purpose of filling in and grading the grounds around the memorial in the city of Plattsburgh in honor of Commodore Thomas Macdonough's victory on Lake Champlain, for marking historic sites in connection therewith, and for the expenses of the commission created by chapter 730 of the laws of 1913 for the celebration of the centenary of the battle of Plattsburgh.*

The marking of historic sites in connection with the battle of Plattsburgh will greatly enhance the value of the memorial itself.

## STATE FOREST PRESERVE

### The War and the Forests

During the past year, several events have combined to give more than usual importance to the subject of forestry.

The wilful destruction of trees by the Germans in the European war-zone has been one of the many deplorable features of the devastation there going on. Trees have been destroyed, not only from military necessity, but in many cases apparently from sheer wantonness. The pictures shown on the screen by Dr. John H. Finley, State Commissioner of Education in the State Education Building in Albany at the annual meeting of the New York State Forestry Association on January 22, 1918, showing great numbers of trees felled along roadsides and elsewhere, were graphic evidences of one of the blighting effects of the German invasion which it will take many years for nature to repair.

The fuel shortage in the winter of 1917–18 also directed attention to the need of more extensive cultivation of wood-lots, and raised in the minds of some people the desire that the constitutional

* The bill failed to pass.

restriction which pervents the removal of trees from the Forest Preserve be amended so that trees might be taken from State lands for domestic fuel purposes. In January, 1918, Hon. James A. Emerson of Warrensburg introduced in the Senate a concurrent resolution (Introductory No. 195) and Hon. Raymond T. Kenyon of Au Sable Forks introduced in the Assembly a similar measure (Introductory No. 237) to amend section 7 of Article VII of the Constitution so as not to prevent "the use of lands in the Forest Preserve, or the timber thereon, to supply fuel for domestic purposes; or for the construction of roads and trails necessary for protection against fire, and for ingress and egress." Statements in the public press indicated that the Conservation Commissioner did not consider such an amendment necessary to relieve the fuel situation, and he took effective steps in cooperation with the Fuel Administration to provide convenient and moderate-priced cordwood for domestic use in the Adirondack region from private sources. The provision for roads and trails was regarded by the Association for the Protection of the Adirondacks and many conservative individuals not members of that organization as too unlimited in its provisions. The resolution was subsequently awarded so as to provide only that the section should not "prevent the Legislature from authorizing the cutting and removal of timber on not exceeding five percentum of land in the Forest Preserve for household fuel purposes," but it did not pass.

### Forest Taxation

The subject of some modification of the tax law in its bearing on privately owned forests also became more prominent during the past winter. For several years past, the private forest owner and others interested in the perpetuation of the forests have been endeavoring to discover some practical and proper plan of State aid for the encouragement of forestry by exemption from taxation or otherwise. From the lumberman's standpoint, the situation appears to be this: To meet market requirements he must cut his trees; but the combined cost of interest, taxes, labor, and young trees for planting is so great that he considers it unprofitable to reforest his denuded lands. Furthermore, being unable to insure his forests against destruction by fire, he is reluctant to let his

forests stand, paying current taxes upon them and running the risk of losing them eventually by fire. The whole situation, therefore, tends to encourage him to cut his trees rather than to let them stand.

In the Legislature of 1918, several bills were introduced embodying some new and original ideas looking toward the assessment separately of the forests and the land on which they grow, and the postponement of the payment of taxes on the forests until the trees were cut. This system has been called a "yield tax." There is a prospect that something more practical than heretofore will be evolved out of the discussion of this important subject now going on, although the final results may not be in the form of the present bills.*

## Adirondack and Catskill Preserves

The administrative head of the State Forest Preserve is the State Conservation Commissioner, Hon. George D. Pratt. The Superintendent of Forests and Chief of the Division of Lands and Forests is Mr. Clifford R. Pettis. From information supplied by their courtesy we learn that during the year 1917 the Forest Preserve was slightly increased in area by purchases and reduced as a result of litigation wherein the courts, after due trial, decided the State was not the owner of the land. The area on January 1, 1918, was as follows:

| | | |
|---|---|---|
| *Adirondack Preserve* | | |
| Area January 1, 1917 | | 1,701,894.72 acres |
| Additions | 809.81 acres | |
| Deductions | 568.05 " | |
| Net increase | | 241.76 |
| Area January 1, 1918 | | 1,702,136.48 |
| *Catskill Preserve* | | |
| Area January 1, 1917 | | 110,970.45 |
| Additions | 225.00 acres | |
| Deductions | 734.23 " | |
| Net decrease | | 509.23 |
| Area January 1, 1918 | | 110,461.22 |

* Two bills dealing with this subject were passed but were vetoed by the Governor.

*Summary*

| | |
|---|---|
| Adirondack Preserve | 1,702,136.48 |
| Catskill Preserve | 110,461.22 |
| Total January 1, 1918 | 1,812,597.70 |

The Legislature in 1917 made available $2,500,000 of the $7,500,000 authorized for the purchase of additional lands for the Forest Preserve; and during the summer and fall seasons several timber appraisers and foresters with field parties were engaged in making appraisals and valuation surveys of lands offered whose purchases were desirable. Up to January 1, 1918, 268,468 acres had been examined, of which the purchase of 13,609.84 acres has been approved by the Commissioners of the Land Office. Negotiations are now complete or pending on many other parcels.

### Forest Fires and Fire Protection

One of the most effective branches of the work of the State Conservation Commission during the past year has been that of fire protection. By means of posters and moving pictures, the public has been educated to greater precaution against setting fires. The removal of inflammable material along the railroads has been effected. About five thousand inspections of locomotive engines were made with a view to eliminating dangerous defects in their fire-box, front-end and smoke-stack systems. A vigilant outlook from watch-towers was maintained. And incipient fires were promptly extinguished. Some of the most interesting figures under this head are as follows:

| | Adirondacks | Catskills | Total |
|---|---|---|---|
| Number of fires | 170 | 64 | 234 |
| Acres of private land burned | 1,473 | 1,995 | 3,468 |
| Acres of State land burned | 190 | 93 | 283 |
| Total acreage burned | 1,663 | 2,088 | 3,751 |
| Total loss by fires | $1,385 | $1,245 | $2,630 |
| Expense of fighting fires | $2,342 | $498 | $2,840 |

The causes of the fires were classified as follows:

| | | | | | |
|---|---|---|---|---|---|
| Smokers | 62 | Campers | 12 | Burning buildings | 2 |
| Locomotives | 52 | Lightning | 11 | Paper balloon | 1 |
| Fishermen | 25 | Incendiary | 5 | Burning sulphur | 1 |
| Berry pickers | 20 | Children | 5 | | |
| Hunters | 19 | Lumberjacks | 2 | Total | 234 |
| Burning brush | 15 | Bee hunters | 2 | | |

A force of 65 rangers and 52 observers was employed during the greater part of the fire season of 1917. About 18 miles of new telephone lines were constructed and seven new cabins were built for observers on mountain stations to replace buildings which had deteriorated and were unfit for further use. These cabins were placed on the following mountains: Hurricane, Blue, Kempshall, Rondaxe, Hadley, Tremper and Twaddell.

During 1917, the Conservation Department erected thirteen steel observation towers, with enclosed rooms on top. One of the lighter type was placed on Hadley Mountain in Saratoga county, and the other twelve were located as follows:

| Station | County | Height of Tower |
|---|---|---|
| Adams | Essex | 47 feet |
| Belfry | Essex | 47 " |
| Blue | Hamilton | 35 " |
| Cat | St. Lawrence | 47 " |
| Catamount | St. Lawrence | 35 " |
| Hunter | Greene | 60 " |
| Loon Lake | Franklin | 35 " |
| Lyon | Clinton | 35 " |
| Poke-O-Moonshine | Essex | 35 " |
| Rondaxe | Herkimer | 35 " |
| Snowy | Hamilton | 22 " |
| Tremper | Ulster | 47 " |

## Reforestation Work

The work of reforesting has been an important one during the past year. The output of the nurseries for the year was 6,761,000 trees, of which 4,059,000 were planted in the Forest Preserve, 1,065,800 supplied to State institutions, and 1,636,200 were sold to private persons. Of those planted on State land, 2,855,970 trees were planted in the spring at an average cost of $6.77 per thousand. The fall planting required 1,103,350 trees and the average cost of planting was $6.37 per thousand.

## REFUGEE LANDS

### Land Donations by the State of New York

In January, 1918, an inquiry from this Society elicited from the Hon. Eugene M. Travis, State Comptroller, and from Dr. James Sullivan, Director of Archives and History of the State Department of Education, interesting information concerning the donation of lands to British refugees by the State of New York at the close of the Revolutionary War.

One of the first laws enacted by the State Legislature after the war, chapter 63 of the laws of 1784, provided for the appointment of commissioners to direct the Surveyor General to lay out a number of townships of unoccupied and unappropriated lands for refugees from Canada and Nova Scotia. On page 227 of the Gazetteer of the State of New York, reference is made to a tract of 231,540 acres of land which was granted by the Legislature for that purpose. It was located in the northeastern and central parts of Clinton county. It was divided into sixty and 420 acre plots, with the exception of one section of 5,000 acres which was subdivided into fifteen equal plots for officers.

There is in the Comptroller's office no list of persons to whom the grants were made, but Dr. Sullivan informs us that there is in the State Library a book known as the Balloting Book containing such a list.

Mrs. W. H. Flint of Plattsburgh, N. Y., has an old Historical Geography of Clinton county which contains an interesting historical sketch of the refugee lands, in the course of which occurs the following paragraph:

"Soon after the war of the Revolution many prominent persons in Canada and Nova Scotia who had taken part in the war on the side of the United States fled from their homes and came with their families and settled on the west side of Lake Champlain, within our county, where they took refuge from British prosecution. Among the persons were officers and people of means who were all fitted for frontier life. Prominent among them were: General Moses Hazen, Col. Edward Antill, Captain Antonio Pauliente, Lieut. Alex. Friot, Lieut. Francis Monty, Lieut. Andre Pepin, Lieut. Louis Gosselin, Lieut. Amable Boilieau, Lieut. Francis Wilmot, Lieut. McPherson (Theodore Chartier, an Indian interpreter), Pierre Ayotte, John Baptiste La Frombois and many others."

The geography above quoted gives the location of their tracts and says that a State law was passed Sept. 10, 1787, setting aside a large tract to be given to the above refugees, and that later in the year Congress gave $2,052 to help them. The names above mentioned are yet familiar in northern New York.

## ACQUIRING PUBLIC DOMAIN

### Primitive and Modern Methods Compared

Apropos of the subjects discussed under the preceding headings of "The State Forest Preserve" and "Refugee Lands," the Hon. Eugene M. Travis, State Comptroller, furnishes the following interesting information concerning the State's early policy of parting with its public domain and its modern policy of acquiring it. He says:

Probably the most important single source of revenue during the early period of New York State's finances was from the proceeds derived from the sale of its public lands. In the first years of government, approximately one-half of the State's entire income was secured in this way. In one year, $325,000 out of the total $500,000 collected, came from this source, according to the State Comptroller's records.

The sale and management of our public domain, at the outset, however, was carried on in a neglectful way and much land was distributed where the State had no clear title of ownership. Because of the policy of disposing of its public lands, large tracts were secured by speculators who reaped immense profits in this way. Over 5,500,000 acres were sold for $1,030,000, and of this vast area, 3,365,000 acres were purchased by one man at about four cents per acre.

Early in the State's history, about half a million acres of this vast domain were reserved for educational purposes. The plan was to create a permanent fund out of the net proceeds collected from the sale of this land, although $75,000 was lost shortly afterward because of careless management. This resulted in turning over all the remaining State land to form the nucleus of the common school fund and about 1,000,000 acres were set aside.

Until about thirty years ago, the State adhered to its early policy of disposing of its lands at low prices and unlimited acre-

age. The established plan was to retain only what was needed for public purposes. Since then, however, New York has adopted a new system by prohibiting the further sale of its public domain. The first step taken in acquiring more land was the floating of the $1,000,000 bond issue for Niagara State Reservation, followed shortly afterward by the first appropriation of $25,000 for the Adirondack Park purchase.

The State's Forest Preserve now approximates nearly 2,000,000 acres, valued at about $25,000,000. These regions are to be forever reserved for the free use of the people for their health and recreation. This domain has been found to be particularly essential to preserve the water and timber supply. The most recent acquisitions include the Palisades Interstate Park and the Harriman gift of 10,000 acres. The State has also acquired a number of smaller parks and reservations of historical or scenic value.

The acquisition of the Forest Preserve raised the troublesome question of the taxation of State land by the locality. At first, the State expressed its approval of the plan whereby its lands should be taxed just the same as private individuals. The result was that while the State's acreage increased 228 per centum, its taxes, during the same period, increased 510 per centum. This meant that the State's lands were assessed at a higher valuation than that of resident owners.

Perhaps the most significant act on the State's part in acquiring the present Forest Preserve area arose in connection with the method of financing this project. Up to recent times, it had been the policy of the State to pay for this vast acreage out of the annual receipts of the treasury. The noteworthy exceptions have been the short term bonds issued for the Niagara Reservation; the $950,000 Adirondack Park issue; the $5,000,000 for the Palisades Interstate Park; $1,284,000 for the Saratoga Springs Reservation, and the recent $7,500,000 issue for Forest Preserve.

But the fallacy of including such expenditures as current expenses soon became apparent, and after that time, New York decided upon the policy of providing the necessary moneys by the creation of a State debt. Such investments are for the benefit of the people for all time, and should, therefore, be distributed over

long periods of years. Moreover, this appropriation is in no sense to be considered as an ordinary expenditure, and it is therefore proper that its full payment be so apportioned.

The issuance of these securities has proven to be a device whereby this Commonwealth has been enabled to spread over periods of years payments exceeding already over $14,734,000, which amount would otherwise have to be met out of current taxes. In substance, such is the scheme by which New York has been enabled to acquire a forest domain which can be duplicated no where in the world.

## HERKIMER HOUSE IN DANUBE

### Bill to Displace the German-American Alliance

We have adverted more than once in this Report to the many points at which the war in Europe touches the subject of scenic and historic preservation in this country. This is strikingly illustrated in the matter of the custody of the General Herkimer homestead in the town of Danube, in Herkimer county. This property was acquired by the State " as an historic landmark and for educational and patriotic purposes " pursuant to chapter 217 of the laws of 1913. (See our Annual Reports as follows: 1913, p. 223; 1915, pp. 254–256 and plate 57; 1916, pp. 295–300.) This interesting and historical landmark on the banks of the Mohawk river, the home of one of the bravest generals of the patriot army, was by the law of 1913 entrusted to the custody of a committee composed of Daughters of the American Revolution and the German-American Alliance. At least two years ago, irritation was caused by an effort on the part of persons of German predilections to Germanize the spelling of the name of Herkimer. (See our Report for 1916, pp. 296–300.) In 1917, after the declaration of the state of war between the United States and Germany and the revelation of certain alleged activities of the German-American Alliance in promoting German propaganda in this country, the participation of members of the German-American Alliance in the administration of this shrine of American patriotism became more distasteful to many American citizens.

Quite independent of the question of the custody of the Herkimer house, and for reasons touching the loyalty of the German-

American Alliance, a bill (S. 3529) was introduced in the United States Senate on January 16, 1918, by the Hon. Wm. H. King of Salt Lake City, Utah, to repeal the act of February 25, 1907, incorporating the alliance.

On the same day, the Hon. Edward O. Davies of Ilion, N. Y., introduced into the New York State Assembly a bill (Introductory No. 81) and on January 21 the Hon. Theodore Douglas Robinson of Mohawk introduced a corresponding bill (Introductory No. 141) in the Senate to transfer the jurisdiction of the Herkimer home from the custody of the Daughters of the American Revolution and the German-American Alliance to a board of commissioners to be appointed by the Governor.*

On January 28, 1918, the Board of Trustees of the American Scenic and Historic Preservation Society voted their approval of such change as would ensure a purely American administration of the property.

As the bill stands at the present writing, in the form of the Senate bill bearing the printed number 1078, it amends the Public Buildings Law (chapter 48 of the laws of 1909) by inserting a new article 7 dealing with the Herkimer home. It transfers the jurisdiction and control of the home and adjacent burial lot to a commission of ten members, five of whom are to be women. It provides that four of the first commissioners shall be appointed by the Governor and the other six shall be Delight R. Keller of Little Falls, Frances W. Roberts of Utica, Ellen S. Munger of Herkimer, William Grandpre of Albany, Robert A. Patchke of Troy and Joseph Kuolt of Utica. They are to serve for overlapping terms of five years each and the Governor is to appoint their successors. The commission is to " have the management, supervision and custody of such premises and of all the property of the State therein or thereon, and shall preserve the same, as nearly as may be, in their original style as an historic landmark and for educational

* On April 11, 1918, a special congress of the National German-American Alliance, held in Philadelphia, voted to disband and turn $30,000 of Alliance funds over to the American Red Cross. On April 12, it was announced that the New York State Chapter of the Alliance had dissolved. On May 2, Gov. Whitman signed the bill passed by the Legislature annulling the charter of the New York State Chapter of the Alliance. The Legislature also passed the bill transferring the jurisdiction of the Herkimer Homestead as above stated.

and patriotic purposes." The commission is authorized to receive money or property by gift or bequest and adopt rules and regulations for the care of the property.*

Chapter 618 of the laws of 1895 providing for enlarging and enclosing the Herkimer burial lot and to erect thereon a monument to General Herkimer's memory; and chapter 217 of the laws of 1913 before referred to are repealed.

### Antecedent History

On November 21, 1917, Mr. David H. Burrell of Little Falls, N. Y., one of the surviving members of the commission appointed by Governor Morton in 1895 for the preservation of the Herkimer burial lot, wrote a letter to Governor Whitman urging that the Herkimer home be placed in the custody of persons of unquestioned American sympathies. In this letter, he contradicted certain claims of Dr. Theodore Sutro of the German-American Alliance and President of the General Nicholas Herkimer Homestead Association concerning the instrumentality of certain organizations in securing the preservation of the homestead. The statement contains so much concerning the movement to save this landmark for patriotic and educational purposes that we give its substance herewith as a matter of historical record:

As early as 1876 the first General Herkimer Monument Association was formed by patriots at Herkimer, New York, its object being to endeavor to raise by private subscription a fund sufficient to erect an appropriate monument, but the times were not propitious and the enterprise was delayed.

Along about 1890 or 1891, Alonzo H. Greene, a Civil Engineer living at Little Falls, and David H. Burrell considered the question of acquiring the General Herkimer Home and particularly the Burying Plot and the erection of a monument to the memory of General Herkimer. Among others with whom they conferred was the late Judge George A. Hardin, and his influence was afterwards given in securing favorable action by the Legislature. Alonzo H. Greene and Mr. Burrell interested Elijah Reed, and then Titus Sheard and Col. John W. Vrooman were interviewed. Both of the last named later rendered most valuable service in the

* The bill was passed and became chapter 198 of the Laws of 1918.

Legislature, and they as well as Messrs. Greene, Reed, Burrell and Judge Hardin, became enthusiastic in the thought that the time had come when, by wise and consistent endeavor, the entire General Herkimer Farm, or at least the Burying Ground, could be obtained and a monument erected to Herkimer.

In 1892 the Oneida County Historical Society, assisted by a few influential citizens and especially those who became the Commissioners, secured the passage of an act by the Legislature by which $2,000 was appropriated for the erection of a monument, but this appropriation was vetoed by Gov. Roswell P. Flower. In 1895 an act was passed providing for enlarging and improving the Burial Lot where General Herkimer was buried and also providing for the appointment by the Governor of five Commissioners to execute the provisions of the law. Governor Morton appointed John W. Vrooman, Titus Sheard, Elijah Reed, Alonzo H. Greene, and David H. Burrell as the Commissioners. All of these men, native born citizens, were residents of Herkimer county, four of them living at Little Falls, N. Y., and one, Mr. Vrooman, residing at Herkimer, N. Y. The first appropriation of $3,000 was not sufficient, and during a later session of the Legislature, largely by the efforts of Mr. Vrooman and Mr. Sheard, supplemented by those of other citizens of Little Falls, $2,500 additional was obtained. The work of Messrs. Greene and Vrooman were especially valuable to the whole project. Although it had been earnestly desired to purchase the entire General Herkimer Farm, as had been talked about by the Commissioners, yet it was found inexpedient, for it was believed that the necessary appropriation could not then be secured, particularly for the reason that the farm was held at that time at a very high price. The burying ground plot was owned by some 25 or 30 lot owners scattered throughout the country, and much time was spent by the commissioners, particularly by Mr. Greene and Mr. Burrell, who lived in Little Falls, in securing title to these various lots in the name of the State of New York, and it was finally accomplished. Then two and one-third acres additional were purchased at a cost of $300, and also a right of way secured for the public to and from the grounds. Thereafter hard work was done by some members of the commission personally in clearing the property and in locating the spot

where the General was buried and in assisting the masons in preparing the foundation for the monument and the foundation for the stone wall that enclosed the entire plot. For this work and for considerable money voluntarily expended by the members of the commission, no charge or expense of any name or nature was made by the commissioners, and no part of same was ever paid.

From the beginning to the end the work done by the commissioners, there was no thought other than of perpetuating and honoring the memory of General Herkimer. The work accomplished belonged to the patriotic citizens of Herkimer county particularly, as well as to the State of New York, who met the expenses incident thereto.

The cemetery comprising several lots as stated above, was purchased by the Monument Commission from private parties after much time and trouble, and entirely independently of the home more recently purchased by the State of New York.

The erection of the Herkimer Monument and the enclosing of the grave yard prior to November, 1896, was influential in leading to the later acquirement of the Herkimer Farm including the General Herkimer Home. The monument, standing 60 feet in height, can plainly be seen from the tracks of the N. Y. C. & H. R. R. R. Co., as well as the West Shore Railroad and from the highways passing east and west through the valley, thus attracting attention to the historic property.

The official report of the Herkimer Monument Commission may be found in the legislative proceedings in Assembly Document No. 23, January 19th, 1897, transmitted by Governor Black. It shows that the Herkimer County Historical Society for nearly twenty years generously took care of the Herkimer Cemetery without expense to the State.

## CURTISS GAME PRESERVE

By chapter 286 of the Laws of 1918, which became a law April 19, the State accepted title to "the lands mentioned in the last will and testament of H. Salem Curtiss, which will was admitted to probate on July 23, 1917. The said lands are more fully identified and described as consisting of about 27 acres, situate in the town of Volney, county of Oswego, bounded on the west by the

Oswego river, on the north by the lands of Elmer E. Taylor, formerly of one Kellar; east by the River road so-called; south by the lands of George Baker's estate and the lands of Thomas Gale. Title to such lands is accepted upon the terms and conditions stated in said will, namely, that the land conveyed therein consisting of about 27 acres shall forever be dedicated to the purpose of a game preserve and breeding place for game."

## HISTORICAL MARKERS IN CENTRAL NEW YORK

### Commemorating Aboriginal and Pioneer History

One of the most remarkable archaeologists and antiquarians in the State of New York is the Rev. William M. Beauchamp, S. T. D., of Syracuse, who, although past his 88th birthday, is still actively interested in preserving the traditions and history of the State and identifying and marking historic sites. We are indebted to him for the following copies of inscriptions on historical markers in Central New York.

The following inscription is on a marker near Great Gully brook, Cayuga Lake. It was dedicated in 1911:

This Valley was the Site of
The Principal Cayuga Village.

To the Brave French Jesuit
Missionaries Whose Heroism
Was Almost Without a Parallel
Joseph Chaumonot
And Rene Menard
Who as the Guests of
Chief Saonchiogwa
Built Here in 1656 the First
House of Christian Worship
In Western New York
Stephen Carheil
Who for Nine Years Ministered
Here and his Co-laborer
Stephen Raffeix
This Memorial is Respectfully
Erected

In Ontario county, on the north Bloomfield road and eastern slope of Mud creek, is a bronze tablet, 16 by 24 inches in size, attached to a boulder, and bearing this inscription:

GANDOUGARAE

Near this spot stood a village of Huron Christians, captives of the Senecas. Father Chaumonot said here in 1656: "Myself I give as a guarantee of the truth I preach."

In a new chapel dedicated Nov. 3, 1669, Father Fremin said: "I beseech you, open your eyes to the truth; acknowledge the God of Heaven and earth; renounce everything that displeases Him; render yourselves by a constant fidelity worthy of everlasting happiness."

Father Garnier also ministered here. James Atondo and Francis Tehoronionga were exemplary members of St. Michael's flock.

A similar marker was placed on Boughton Hill in 1915.

On Indian Hill in Pompey, Onondaga county, a granite monument surmounted by a cross was unveiled September 23, 1917. The inscription reads:

INDIAN HILL

In a bark chapel on this spot, the holy sacrifice of the Mass was first offered in N. Y. State by Rev. Joseph M. Chaumonot, S.J., Sunday, 14 November, 1655.

"Going therefore, teach ye all nations, baptizing them in the name of the Father, and of the Son, and of the Holy Ghost, teaching them to observe all things whatsoever I have commanded you."

St. Matthew, XXVIII, 19–20
Erected by the Order of the Alhambra
Anno Domini MCMXVII

On August 23, 1915, a bronze tablet, 26 by 28½ inches in size, on the front of St. James' Church, Skaneateles, was unveiled. It bears the following inscription:

Here
Bishop Frederic Cammerhoff
and
David Zeisberger
Moravian Missionaries
Built "The Pilgrims' Hut
at St. John's Beach" on
St. John Baptist's Day, 1750.
Here also
Col. Gansevoort's Hundred Men
Bearing the American Flag
Rested September 22, 1779,
On Their Eastward March
From Sullivan's Army

Erected by the
Onondaga Historical Association
and the
Women's Village Improvement
Association
100th Year St. James Parish
1915.

In Onondaga Valley, on the west side of the creek, is a marker bearing the following inscription:

In the Small House 40 Rods
West of the Indian Trail Lived
Ephraim Webster
Soldier, Pioneer, Indian Interpreter and Friend, First Supervisor
of this Town, Born in New
Hampshire 1762, Settled Here in
1786. Died 1824.
Erected by
Onondaga Chapter, D.A.R.
1915.

Also in Onondaga Valley, on the east side of the creek is a marker bearing this inscription:

Where the Indian Trail
Crossed the Creek (34 Rods West)
On May 24th, 1788
Landing From Their Crude Boat
Major Asa Danforth
And His Noble Wife
Hannah Wheeler Danforth
Builded the First Christian
Home in this County
Erected by
Onondaga Chapter, D.A.R.,
1915.

On a church in Manlius is a bronze tablet reading:

CHRIST CHURCH
The Parish was Organized in 1811
and the Church was Built in 1813
The First White Child in the Village of Manlius
Baron Steuben Schaeffer
Was Born Near This Spot in 1794.

It is proposed to place a monument on the spot by Onondaga Lake which was occupied by the French fort in 1656 and afterward by Frontenac's fort in 1696.

The Madison County Historical Association also contemplates a marker for the site at Nichols' Pond, where stood the fort which Champlain besieged in 1615. Nichols' Pond is in the town of Fenner, about three miles east of Perryville, Madison county. (See "Aboriginal Occupation of New York," by William M. Beauchamp, S. T. D., which is Bulletin No. 32, Volume 7, of the New York State Museum.) Dr. Beauchamp knew Gen. John S. Clark, O. H. Marshall and George Geddes, who warmly discussed the subject of this site from varying standpoints and has made a special study of it. He has prepared for this Society a paper about the site which we embody in Appendix D of this Report. (See plates 44–47.) He also has a plan and sketch made before Nichols' Pond was partially drained. He knows of nothing else showing the features in Champlain's day except a sketch showing a line of corn-pits on a ridge. A little water now remains in the north end of the pond, that farthest from the fort site.

In Salina there is a fountain — the Kirkpatrick fountain — commemorating Le Moyne and his discovery of the Salt Springs.

## REMOVAL OF MONTEZUMA AQUEDUCT

### The Passing of a Picturesque Landmark

The completion of the new barge canal across the State has involved the removal of one of the most picturesque landmarks in Central New York, the Montezuma Aqueduct. This structure, according to Mr. E. H. Gohl of Auburn, custodian of the Cayuga County Historical Society, was built to carry the old Erie canal across the Seneca river and the extensive Montezuma Marshes lying west of the village of Montezuma, in Cayuga county. The aqueduct was begun in 1849, finished in 1857, and cost $200,000. It replaced the original earth-embankment canal which was on a level with the river and marsh. The structure, including abutments, was 895 feet long. It rested on 31 masonry piers, standing 27 feet from center to center. The support of each pier consisted of 120 oak piles driven into the bed of the river to a depth of from 30 to 50 feet. On top of the piles was a 2-inch planking. Upon the latter was laid a granite pedestal 12 feet high, and on the pedestal was a granite pier 9 feet high, and measuring 5½ by 12 feet at the top. Upon these piers was constructed of wood

the canal itself, 53 feet wide and 8 feet deep, and a tow path 12 feet wide. Gates two feet by two were placed along the bottom of the viaduct every 30 feet and were raised or lowered by hooks. This was to regulate the surface of the canal if the water rose too high and there was danger of barges crashing against the sides. (See plates 40 and 41.)

In November, 1917, it was announced that 20 of the 31 piers, with their connecting structure, would soon be removed to admit of the passage of boats on the new barge canal; and during the past winter of 1917–18 a large section in the viaduct was removed, leaving, however, two long approaches and many of the piers at either end.

The mutilation of the fine masonry and the interruption of travel on the old tow-path are viewed with great regret by many citizens who had become attached to this monumental structure — a feeling similar to that with which the people of the City of New York view the threatened mutilation or removal of High Bridge across the Harlem river for the same reason.

The Auburn Citizen of November 21, 1917, speaking of the subject, said:

"Engineers, contractors, masons and others who have seen this fine piece of work made on very doubtful foundations nearly 70 years ago to carry the Erie Canal across the shifting muck of the Montezuma marsh marvel today at the excellence of the work done by the state's contractors three-quarters of a century ago.

"To step along the cut-stone wall that rises a number of feet above the pathway and from one end to glance in a line down the edge to the other end running into the distant end of the swamp, one notes that the alignment today after nearly 70 winters of heavy frost is as perfect as the day the big stones were laid. Competent engineers, who have seen the work, marvel at its permanent character, and express the belief that there is nothing like it in the whole country. It is as straight in alignment and as solid in its position as if it were actually carved from a rock landscape itself.

"A few days ago the state, which is anxious to get the entire Barge Canal into operation by next summer, awarded the contract to remove the old viaduct to Scott Brothers, the contractors now engaged in putting the finishing touches upon the new Barge Canal. The old viaduct must go because it stands in the way of the new canal and its removal will be made with deep regret by

the men who do the work, because they have a professional pride in good workmanship and bear a respect toward the builders of the massive structure that makes them feel regretful in the stern duty of making way for the new canal. The routing made necessary by the engineers who were governed by the topographical conditions under which the new Barge Canal was planned gives the new canal almost a direct north and south traverse at this point and it is therefore necessary to take away quite a number of spans of the old viaduct."

Mr. J. P. Scott of Auburn, who is a member of the firm which contracted to remove the viaduct, said he never saw a more wonderful and better built piece of engineering.

## ALGONKIN REMAINS NEAR OWASCO LAKE

A discovery which appears to be of more than usual significance in the Indian history of the State is reported to us by Mr. E. H. Gohl of Auburn, N. Y., custodian of the Cayuga County Historical Society, who, in April, 1915, found on the bank of Owasco creek, near Auburn, and just south of the old "White Bridge," a short distance from the lake, fire-places and relics which he pronounces to be Algonkin. The latter include pipes, bone and horn implements, and clay vessels, one of the latter being a beautiful specimen with artistic frieze decoration. Heretofore, Algonkin remains have been found on the fringe of New York State, but not in the central portion. Mr. Gohl's find of what seems to be an Algonkin village site at Lakeside Park, Owasco Lake, if substantiated by similar discoveries, may establish the fact of prehistoric Algonkin occupancy of New York State. (See plates 42 and 43.) It should be mentioned in this connection that Dr. Buckland of Fleming recovered some years ago, near the Lakeside site, perhaps the largest clay vessel yet found in this State, 52 inches in circumference. This vessel was acquired by Mr. G. G. Heye, of the Museum of the American Indian in New York City.

It is hoped that this announcement will evoke reports from other archaeologists for comparative purposes, and be an aid to science and the history of aboriginal migrations east of the Mississippi.

Mr. Gohl has also located three Indian fort sites in Cayuga county which are lovely, unspoiled, nature spots and which it is

to be hoped may be preserved for posterity. He informs us that about $2,000 would purchase the three sites, each having an area of about 15 acres. They include great trees, deep ravines, waterfalls, and beautiful vistas of surrounding scenery, and all are near highways. The sites are as follows:

Upper Cayuga (Goiogouen) on the south side of Great Gully Brook. This fort was destroyed by a detachment of Gen. Sullivan's army September 22, 1779. It was also site of the Jesuit Missions in 1655–1684. Timber still covers the site of 20 acres between two deep ravines 175 feet deep. Original post holes for the stockade can be seen; also many *caches* or pits for storing corn by the Indians during a siege. It was occupied by the Cayuga Indians.

Indian Fort at Elsworth, on Payne's creek, at the juncture of two deep ravines. A waterfall of over 80 feet can be seen from the remains of the stockade. It is not yet known what tribes occupied site, Iroquois or Algonkin. The tract embraces about 15 acres.

Prehistoric Iroquois fort at Locke, between two deep ravines, from 200 to 800 feet deep. Timber covers site. Two rows of post holes for the stockade and many *caches* or corn pits can be seen. Fine pottery, pipes, etc., have been recovered. The tract includes 20 acres.

## SPIRITUALIST LANDMARK IN CHAUTAUQUA COUNTY

### House of the Fox Sisters Preserved

In 1916, Mr. Benjamin F. Bartlett purchased the house of the Fox sisters which formerly stood on a lonely country road about a mile from the railroad station of Newark, N. Y., and moved it to Lily Dale, N. Y., where the large spiritualist camp-meetings are held, with a view to preserving it as a memorial of spiritualist revelation. The Rev. F. A. Thomas, pastor of the Spiritualist Union Church at 708 Tremont street, Boston, Mass., relates, according to the belief of his sect, that in this little modern cottage "was proven the continuity of life beyond the grave; here the hope of immortality, the greatest goal of the race, was fulfilled. Here the first spiritual telegraphy known to the world was

instituted, through the agency of the excarnate and the mediumship of children. Here a philosophy and religion was founded."

From Mr. Thomas we learn that in December, 1848, John D. Fox moved into the cottage with his wife and two little daughters. Mr. and Mrs. Fox had been for many years members of the Methodist church, and bore a record of honor and strict integrity. When they became pioneers of spiritualism they were ostracised, persecuted and expelled from church fellowship, and so great were their trials that the hair of the mother turned white in a single week.

About a month after their first occupancy of this wooden dwelling strange noises began to occur, loud raps, footsteps, a tremulous jar of the house, with other demonstrations, the cause of which was searched for in vain by people of all walks of life. This continued until, on the night of March 31, 1849, what was interpreted as an intelligent response to questions was gained by raps. One rap meant "no;" two, "don't know;" three, "yes." Afterward the alphabet was used to denote letters which formed words.

By this means, according to the Rev. Mr. Thomas, it was learned that the little house had been the scene of the murder of a peddler, Charles B. Resna, who was passing the night there. The motive of the crime was to get $500 which he carried and the contents of his pack. His body was buried in the cellar, so the spirit affirmed, and afterwards bones were found in the place indicated.

The pioneers of the movement suffered many hardships. The early spiritualists who accepted the revelation were sneered at and persecuted. The Fox sisters became famous as Spiritualist mediums, but they were accused of deception, and at one time were rescued from an angry mob by Isaac and Amy Post. The Spiritualists believe that time has vindicated the Fox sisters and have the utmost faith in the genuineness of the communications which made them famous.

## NIAGARA FALLS

### Loss of its Crowning Glory Threatened

At no time since the creation of the State Reservation at Niagara has the danger of robbing Niagara Falls of their crowning glory been so great as at the present time. Heretofore, the demands

for the diversion of a greater volume of water from the falls have been due only to commercial enterprise. Today, added to the demands of commercial self-interest are claims made in the name of patriotism, not only that the waters of Niagara be diverted to the utmost limit allowed under the treaty with Great Britain — namely, 20,000 cubic feet per second on the American side and 36,000 cubic feet per second on the Canadian side,— but also that the treaty itself be amended so as to permit unlimited diversion of water from the river above the falls.

The attitude of the American Scenic and Historic Preservation Society on this question has been stated many times. Aesthetic consideration must always yield to the imperative demands of unavoidable public necessity. Human life and national life are prime considerations. Their preservation is an object which must take precedence over everything else; for what value would the delights, the refinements and the comforts of life be if there were no life itself to which they might minister. It must therefore be acknowledged as a fundamental principle that the actual necessities of existence — human and national — must first be secured, and that the amenities must come afterward.

But it must also be acknowledged that a people whose powers are altogether and continuously absorbed in a mere struggle for existence and in providing for only the material wants must be living in a crude state of civilization, and it is to be doubted if it is necessary for any civilized nation today to abandon everything in the way of culture that distinguishes it above the condition of the savage, and to concentrate every thought and every energy upon the mere elemental struggle for self-preservation. In other words, while the American people should withhold no effort to prosecute the war to a successful issue, there is still a residue of its thoughts engaged in its customary activities. There is still a large proportion of the people living substantially as in normal times, and all the people still retain the cultural instincts, feelings and desires of normal times. Furthermore, the war, terrible as it is, is a transitory thing. The nation will once more return to the thoughts and occupations of peace. And nothing which will contribute to the well-being and happiness of the people in those better days that are to come should be sacrificed now needlessly.

The question, then, of taking away the glory of Niagara by depriving the falls of their water turns on the question of necessity. There are those who see only one way of doing a thing, and there are those who see more than one way. And opinion is far from unanimous as to the necessity of developing certain national industries at Niagara Falls and Buffalo when power is available elsewhere.

There is also a division of opinion as to whether it is necessary to divert more water from above Niagara Falls in order to develop more power. We are informed by engineers that the same volume of water taken by conduit to Lewiston Heights on the American side, or to Queenston Heights on the Canadian side, will develop more than 2½ times the efficiency of water used at the falls. This Society believes that the burden of proof as to the necessity for further depleting the falls rests upon those who propose such diversion, not upon those who wish to see Niagara Falls preserved.

### Increased Efficiency on Canadian Side

Concerning the increased efficiency of water conducted to Lewiston or Queenston Heights, above mentioned, we may mention some figures relating to the recent transaction by the Ontario Hydro-Electric Commission.

This commission has heretofore purchased its supply of electric energy from the Ontario power plant at Niagara, on a contract by which it was to be provided with energy up to a total of 100,000 horse-power at the rate of $9.00 per horse-power. The plant in question has a total capacity of 138,000 electric horse-power, the balance of its output being sold to other customers at much higher rates, viz., $12.50 up to $15 per annual electrical horse-power.

The power commission finding the demands for energy greatly on the increase, was compelled to find a means of acquiring additional power, which was not available from any other source than the waters of Niagara, and it has consequently decided, we are informed, to purchase the property of the Ontario Power Company and by reconstructing the plant at Queenston Heights at the foot of the rapids, it will largely increase the horse-power developed with the same amount of water as is now taken from the Niagara river.

The power company is allowed to utilize 11,180 cubic feet per second, which upon a total fall of 160 feet at Niagara, affords about 180,000 water horse-power. At Queenston Heights the same volume of water, upon a total fall of 310 feet, is expected to develop 390,000 water horse-power, or approximately 300,000 electrical horse-power.

The cost of the necessary conduit and of the new plant at Queenston is estimated at $15,000,000, or approximately $50 per electrical horse-power.

These figures raise the question whether it is not more advisable to locate any further power developments at Lewiston or Queenston rather than at Niagara and if the State of New York is to invest money in the utilization of water available on the American side, it is a question whether it should not be done by placing a plant at Lewiston and conducting the water thereto instead of building at Niagara.

### Bills for Hydro-Electric Plant in State Reservation

The foregoing considerations are also raised by three bills now pending before the Legislature of this State providing for the construction of a power plant within the State Reservation at Niagara.

On January 15, 1918, Hon. Leonard W. H. Gibbs of Buffalo introduced in the Senate three bills (Nos. 66, 67 and 68), and on January 24 Hon. Herbert A. Zimmerman of Buffalo introduced corresponding bills in the Assembly,* providing as follows:

Senate bill No. 66 provides for the issue of State bonds to an amount not exceeding $3,000,000 for the use of the Commissioners of the State Reservation at Niagara in constructing and equipping a hydro-electric power plant on the reservation; and for the submission of the proposition to the people to be voted on at the election in November, 1918.

Senate bill No. 67 proposes to amend the Public Lands Law so as to give the Commissioners of the State Reservation at Niagara the authority to construct, according to plans prepared by the State Engineer and Surveyor, a hydro-electric plant and to manage, control or lease the same.

* None of these three bills was passed.

Senate bill No. 68 directs the Commissioners of the State Reservation at Niagara to construct in the State Reservation on or near Goat Island a hydro-electric power plant capable of developing at least 500,000 horse-power. The bill requires that the site shall be selected and the plant built " in such a manner as to preserve as far as possible the scenery of Niagara Falls in its natural condition." The commission is authorized to conduct the plant under its own management or to lease it for a period of 25 years under such terms as it may judge to be for the best interests of the State. The bill also contains provisions concerning an annual report and paying the receipts from the operation of the plant into the State treasury.

In voicing the opposition of this Society to the foregoing bills the Hon. Adelbert Moot of Buffalo, chairman of our Niagara Falls committee, recently wrote:

" More than a quarter of a century ago, this State appropriated a very large sum of money to remove unsightly structures from lands it then acquired, and to turn such lands into a park for the use of the people, instead of longer permitting them to be used for money-making purposes.

" If additional power is wanted, the waters of Niagara river are subject to the legislation of Congress and to the treaty between this country and Great Britain. Furthermore, every competent hydraulic engineer knows that if additional power is wanted or needed, the thing to do is to construct a canal from the Niagara river above the rapids above the Falls, to a point upon the Niagara river above Lewiston, where the greatest possible fall can be obtained, because by so doing nearly three times the power can be obtained from the water taken from Niagara river than can be obtained from it by using it as proposed at Niagara Falls. At the present time, in Canada, such a canal is to be constructed to a point above Queenston, that some of the water taken from the Niagara river in Canada may be made to yield about three times as much power as it is now yielding. Thus, by keeping all power plants off the Reservation at Niagara, and conserving our water power scientifically as suggested, we may preserve the beauty of Niagara Falls and still take the amount of water from Niagara river permitted by the Federal treaty and legislation referred to,

and so use it as to make it yield about three times the power it otherwise would yield. It follows, therefore, that even if the State should have anything to do with this business of creating water power, it should create and conserve that water power to the uttermost, in its own interest, and this it cannot do by constructing a plant anywhere upon the Reservation at Niagara Falls.

"We, therefore, oppose these bills because such a plant upon the Reservation would be just as ugly if erected by the State as it would be if erected by an individual; also because such a plant upon the Reservation is utterly unnecessary and unwise; because nearly three times as much power can be developed elsewhere from the same water, if it be desirable to develop further water power, or turn it into electrical power at or near Niagara Falls."

### Temporary Permits for Diversion of Water

On June 30, 1917, the United States Senate agreed to the report of a joint conference committee of the Senate and House of Representatives as follows:

The committee of conference on the disagreeing votes of the two Houses on the amendment of the House to the joint resolution (S. J. Res. 13) extending the time within which the "Joint resolution authorizing the Secretary of War to issue temporary permits for additional diversions of water from the Niagara River" shall remain in effect, having met, after full and free conference have agreed to recommend and do recommend to their respective Houses as follows:

That the Senate recede from its disagreement to the amendment of the House to Senate joint resolution No. 13, and agree to the same with an amendment as follows: In lieu of the matter inserted by the amendment of the House to said Senate joint resolution No. 13 insert the following:

"That public resolution No. 45 of the Sixty-fourth Congress, approved January 19, 1917, entitled 'Joint resolution authorizing the Secretary of War to issue temporary permits for additional diversions of water from the Niagara River,' is continued in full force and effect and under the same conditions, restrictions, and limitations until July 1, 1918: Provided, That the Secretary of War is hereby authorized and directed to make a comprehensive and thorough investigation, including all necessary surveys and maps, of the entire subject of water diversion from the Great Lakes and the Niagara River, including navigation, sanitary and

power purposes, and the preservation of the scenic beauty of Niagara Falls and the rapids of Niagara River, and to report to Congress thereon at the earliest practicable date. To carry out the provisions of this proviso, there is hereby appropriated, out of any money in the Treasury not otherwise appropriated, the sum of $25,000."

The effect of the adoption of this report was to extend to July 1, 1918, the period during which the diversion of the whole 20,000 cubic feet per second on the American side allowed by the treaty with Great Britain should be permitted.

### Report of the Thompson Committee

The report made to the present Legislature by the legislative committee of which Senator George F. Thompson is chairman, and which was appointed to investigate the subject of the diversion of water from Niagara river for power purposes, contained much matter of public interest and some recommendations which we trust will not be adopted without careful technical study. The chairman's publicly declared skepticism concerning the value of the opinions of technical engineers (see Annual Report of this Society for 1916, page 324) appears to be reflected in some of the views expressed in the report of his committee concerning the possibility of the economical transmission of electric energy from Niagara Falls to New York City and the relative cost of electric energy developed from coal fuel and hydraulic power at different places.

The report makes nine recommendations as follows:

First — That the State of New York request the Federal Government to immediately take such action as may be necessary to promulgate a new treaty with the Dominion of Canada, for the purpose of increasing the amount of water which may be diverted from the Niagara River on the American side, both above and below the Falls.

Second — That the State of New York insist that all water permitted to be diverted, through action of the Federal Government, shall be subject to State control.

Third — That the State shall cause all water diverted to be so used as to develop the highest percentage of efficiency, and that the amount of all diversions be definitely fixed.

Fourth — That an adequate rental shall be charged for all water diverted in excess of the original grants made under the provisions of the "Burton Act," so-called and that all further permits shall be limited to the shortest practical time.

Fifth — That the Public Service Commission Law be amended by permitting investigation and regulation by the Public Service Commission, of any companies using diverted water for power purposes.

Sixth — Owing to the imperative demand for additional power at Niagara, and the necessity for quick and efficient development, your Committee would further recommend that the State, at this time, request the Federal government, under the present treaty, to grant to it a permit for the diversion of such an additional amount of water as can be diverted under its terms, and that the State grant unto the Hydraulic Power Company, and the Niagara Falls Power Company or to any other persons or corporations who may apply therefor, the right to divert such water, in such quantities and in such a manner, as will insure its most efficient use, and upon such conditions and regulations as may be reasonable and proper; for a limited time, and for full rental compensation to be paid to the treasury of the State.

This recommendation is made because of the belief on the part of the Committee that it is the most feasible and practicable method of obtaining quick and efficient use of any additional diversion.

Such water could be used at a head of two hundred ten (210) feet by the Hydraulic Power Company, and at an efficiency of about 20 H. P. for each cubic second foot of diversion. The canal of this company could be more readily enlarged in a shorter space of time, and at less expense, than any proposed canal from the second pool of the river overland to any point in the gorge below.

It is claimed that the present plant of the Niagara Falls Power Company could be readily and effectively enlarged, so that its use of water diverted would be as efficient as the present installation of the Hydraulic Power Company. It would also have the advantage of allowing the water thus diverted to be used again in the Lower Gorge, where an additional seven horsepower per cubic second foot diverted could readily be developed.

By this combination of upper and lower river diversion, a most practical and efficient development of at least 575,000 horsepower could be made without disturbing existing conditions. The rights of existing companies would be fixed and determined, and all the most pressing present demands for additional power could be satisfied. In this manner the full fall of the rapids, cataract and lower

gorge could be most efficiently utilized, and such additional diversion as would not be permitted could not, in any way, materially affect the level of the lakes or impair the integrity of the river as a boundary stream, and would have the very great advantage of quickness of development, and freedom from embarrassing natural conditions, such as ice.

Seventh — That an additional diversion of water to at least the extent of 20,000 cubic feet per second, be made from the Grass Island-Chippewa pool on the American side of the river. This can be done without seriously affecting its navigability or that of adjacent lake ports and channels; without detracting from the scenic beauty of the Falls, and without interfering with the integrity of the river as a boundary stream.

Eighth — Your Committee hesitates to recommend any specific policy to be adopted by the State in connection with the development of its water powers without further investigation. Having in mind, however, that previous committees of the Legislature, public officials, and commissions have recommended such a development by and on behalf of the State itself, and that the Legislature of the State has heretofore expressed its approval, your Committee feels that this should be the established policy, and that it should be forcefully and fearlessly carried out. Before, however, any final determination be made as to any specific development we suggest that the most practical and business-like method of procedure would be to constitute a commission as herein recommended with power to procure plans, specifications and estimates of the cost of installing power generating plants, together with a prospectus showing the cost of the generation of power in such plants; the amount of power which could be efficiently generated; its selling price, and the extent of the market therefor. If, after such investigation it should be deemed advisable for the State to conserve its resources and develop this power, your Committee would respectfully recommend, after careful consideration of many plans and places submitted in connection with further hydro-electric development, that a diversion of water, to the extent of 10,000 cubic feet per second be made at a point just easterly of and above the apex of the Horseshoe Falls in the vicinity of the Three Sister Islands at Niagara and that there be constructed for such purpose a submerged dam, which would also tend to more equally distribute the flow of the river at this point, to the end that the easterly portion of the Horseshoe Falls, known as "Terrapin Rock," would again become continually submerged and subjected to a reasonable flow of water. And that the diversion for power purposes be conducted in and through conduits, skirting the westerly shore of Goat

Island, northerly to Terrapin Point, where the water could be permitted to be carried by penstocks to a generating station, so situated as to be unobservable from any point on the American side of the river, and to be architecturally of such a nature as to not in any way interfere with the scenic beauty of the falls from any point within the Canadian Park.

This, in the opinion of your Committee, would be the most feasible plan and method of starting such development.

The advantages of a diversion at this point are readily apparent. Taken below the weir of the second Niagara pool, it can have no effect whatever upon the level of the river itself, or the level of Lake Erie, or its adjacent ports. Taken from a point below the head of Goat Island, it cannot, in any way, interfere with the volume of the present flow of water over the American Falls. Necessitating the construction of a submerged dam, it meets the recommendations of the government engineers as to what is now necessary to be done in order to preserve the contour of the Horseshoe Falls at this point. Carried by concealed conduits, extending along the westerly bounds of Goat Island, and dropping over the crest of the Falls at Terrapin Point, it cannot, in any way, affect the scenic beauty of the American Falls or the American Park.

Ninth — That a permanent commission consisting of the Governor, or a representative appointed by him; the Lieutenant Governor; the Attorney-General; the State Engineer and Surveyor; and the Conservation Commissioner be constituted by appropriate legislation to urge upon the Federal government a proper recognition of the inherent rights of the State to the full control and regulation of its boundary waters, and to formulate a definite and fixed policy in relation to all water powers which are or may be brought under State control, including the canals, to the end that their speedy and efficient development may be forcibly required.

It will be noted that one of the most important recommendations of the foregoing report is that which seeks an amendment of the treaty with Great Britain so that at least 50,000 cubic feet per second may be diverted on the American side. This 50,000 cubic feet would be made up of the 20,000 cubic feet per second diverted at the present time, 20,000 more from the Grass Island-Chippewa pool, and 10,000 cubic feet more near the Three Sisters Islands. Of course, if the treaty is amended to increase the diversion on the American side from 20,000 to 50,000 cubic feet per second, Canada will demand an increase in like ratio from 36,000 cubic feet at present allowed her to 90,000 cubic feet. This would make a total diversion of 140,000 cubic feet per second.

What the effect of such diversion would be on the appearance of Niagara Falls may readily be imagined. The normal volume of the Niagara river without any diversions is 210,000 cubic feet per second; but sometimes seasonal variations occur which reduce the discharge to 160,000 cubic feet per second.

If 140,000 cubic feet per second should be diverted, only 70,000 cubic feet per second would be left in normal circumstances and only 20,000 cubic feet per second at times of moderately low water. When it is realized that at the present time, assuming a normal volume of 210,000 cubic feet per second and a total diversion of 56,000 cubic feet per second permitted by treaty on both sides of the river, only 4½ per cent of the volume of the river passes over the American fall, it can readily be seen that a diversion of 140,000 cubic feet per second would mean the utter disappearance of the American fall, and the reduction of the Horseshoe Fall to a mere driblet.

It is needless to repeat that the American Scenic and Historic Preservation Society is opposed to any such treatment of Niagara Falls.

### State Boundary Waters Commission

To carry out the ninth recommendation of the committee of which he was Chairman, Senator Thompson, on April 3, 1918, introduced in the State Senate a bill (Introductory No. 1142) to create a State Boundary Waters Commission to confer with the United States, Canada and the Province of Ontario regarding the further development of power on the Niagara and St. Lawrence rivers. The commission is to consist of the Attorney-General, the Conservation Commissioner and a third member appointed by the Governor. The Governor is to request the United States to negotiate with Great Britain for a suitable treaty for increasing such power development. Ten thousand dollars is appropriated.*

### Bill for State Hydro-electric Power Commission

On February 12, 1918, Hon. G. F. Thompson introduced in the State Senate a bill (Int. No. 397) to create a State Hydro-electric Power Commission,† consisting of one person to be appointed by

* The bill failed to pass.

† The bill failed to pass.

the Governor, one Senator to be designated by the President *pro tempore* of the Senate, one Assemblyman to be designated by the Speaker of the Assembly, and the Attorney General and the State Engineer and Surveyor. The commission is to ascertain the costs and methods of developing and transmitting hydro-electric power and to prepare plans to illustrate such methods. An important provision is the following:

"It shall be the duty of the commission to urge upon the Federal government a proper recognition of the inherent right of the State to the full control and regulation of its boundary waters and to confer with representatives of the Federal government, Dominion of Canada and province of Ontario regarding the further development of power on the Niagara and Saint Lawrence rivers; and to request the United States government to open negotiations with the government of Great Britain for the purpose of providing by suitable treaty for modification of the existing treaty by increasing the amount of water to be diverted from boundary streams for power purposes and authorizing the construction of facilities in such streams for distributing the flow more evenly and maintaining lake levels. The commission may authorize the Attorney-General to bring such action or actions against the Federal government as may be necessary to determine the rights of the state and of the Federal government in relation to water powers."

### Bills to Consolidate Power Companies

On April 5, 1918, Senator Thompson introduced a bill (Int. No. 1228) to authorize the consolidation of the Cliff Electrical Distributing Co., the Niagara Falls Power Co., and the Hydraulic Power Co. of Niagara Falls into a single corporation;* and on the same day another bill (Int. No. 1227) authorizing the new corporation, in order to secure an efficiency of not less than 19 horsepower per cubic foot per second of water diverted, to reconstruct, enlarge and improve its works, canals, tunnels, etc., and to construct new works, canals, tunnels, etc.; provided, nothing in the act shall authorize the diversion from the Niagara river of any water in excess of the amount heretofore authorized by the State with respect to the consolidated corporations.†

* This bill was passed and became chapter 596 of the Laws of 1918.

† This bill was passed and became chapter 597 of the Laws of 1918.

At a hearing before the Committee on War Measures at Albany on April 10, 1918, Gen. Charles Keller, representing the War Department, appeared in behalf of the Federal government to advocate the consolidation in the interest of the more efficient use of the water taken. He said that the Government had commandeered the entire power output of the two generating corporations it was proposed to consolidate, but was short of the energy required to keep war industries at Niagara Falls and in the frontier district moving.

Objection was made, however, by representatives of other power interests at Niagara Falls on the ground that realization of the project might render the new corporation an invader of their rights and on other grounds.

### Conflict Between State and Federal Authorities

One part of the report of Senator Thompson's committee relates to the conflict of opinion between the Federal and State authorities concerning their respective rights at Niagara. It reads as follows:

For many years, prior to 1880, the principal asset of the city of Niagara Falls was the scenic grandeur of the cataract. It attracted people from all over the world. Up to that time, however, the potential power value of the Falls was never seriously considered. Some paper and grist mills had here been located, and water was taken from the river for their operation without Government or State authority, the owners exercising this right as riparian owners.

In later years, however, when the limitless power of the cataract began to be apparent, and large diversions of water were contemplated for the purpose of producing hydro-electric power, many applications were made for charters to the Legislature of the State, and many were granted between the years 1880 and 1895. Up to this time it was generally conceded that the diversion of water, for power purposes, in the Niagara River, resided in the State, and it was not until after the Niagara Falls Power Company had become a large power producing and transmitting agency that any particular attention was given to the rights of the Federal Government in and to the waters of the Niagara River.

During the years 1905 and 1906, and for some time previous, agitation had been started for the alleged purpose of preventing a general diversion of waters of the Niagara River, and in order to preserve its scenic effects. As a result of this agitation the International Waterways Commission was appointed by the Govern-

ment, and their report, which was submitted to Congress on the 27th day of March, 1906, led to the passage of the so-called "Burton Act,"* which was passed for the purpose of permitting Federal control and regulation of the waters of the Niagara River. Under its provisions, all diversoins were to be made under permit of the Secretary of War, and the President of the United States was requested to open negotiations with Great Britain for the purpose of procuring, by suitable treaty, such regulation and control of the water of the river as would tend to preserve the scenic grandeur of the Falls.

Without proper investigation, or scientific information concerning the conditions which might possibly affect the scenic beauty of the cataract, and without knowledge of the amount of water which could be reasonably diverted for power purposes without affecting the navigability of the river, or interfering with its integrity as a boundary stream, the United States Government hastily concluded a treaty with Great Britain, in the year 1909, which limited the amount of diversion for power purposes to 36,000 cubic feet per second on the Canadian side, and 20,000 cubic second feet on the American side of the boundary.

After the proclaiming of this treaty,† the Niagara Falls Power Company was permitted to divert 8,600 cubic feet per second, and the Hydraulic Power Company 6,500 cubic second feet, and there was also allotted to the city of Lockport 500 cubic second feet, which was to be diverted by way of the Erie Canal. This left available additional diversion of 4,400 cubic second feet, which, under the policy of the Government, was never allowed to be used until the first of February, 1917, when its own urgent necessity for munitions of war compelled it to release to the two generating companies at the Falls, all of this additional water which they were able to make use of.

After the passage of the treaty many individuals and corporations applied to Congress for legislative grants, and made requests to the Secretary of War for diversion permits, whereupon the National Government immediately assumed to possess the fundamental right of regulating all diversions from the Niagara River, and have since insisted upon the correctness of their position. This arbitrary attitude of the National Government has tended to deprive the State of New York of those fundamental rights in and to the waters of its boundary streams which were originally guaranteed to it by the Federal Constitution, and never having relinquished or assigned any of these rights to the Federal Government, the State of New York is to-day clearly entitled to exercise them.

* The Burton act was enacted June 29, 1906.

† The treaty was proclaimed May 13, 1910.

Your Committee appeared before the Foreign Relations Committee of Congress for the purpose of endeavoring to impress upon the National Government the right of the State to the control of its boundary streams. These representations of your Committee, however, as well as those of former committees, have been consistently ignored, or at least not acted upon, which leaves the legal status in this controversy extremely uncertain, and absolutely prevents any additional diversions of water for power purposes except by permit from the Federal Government.

Dire necessity has recently compelled the Federal Government to allow further diversion up to the limit of the treaty, but these are only under temporary permits which will expire on the 30th day of June, 1918. Under these conditions it cannot be reasonably expected that any great amount of additional development will be made owing to the uncertainty of the tenure of these grants.

The Committee feel rather delicate about expressing their views in relation to the unfortunate situation which impedes the development of this power on account of the attitude of Congress and the National Government. Legislation in Congress embarrasses legislation by the State. Threatened legislation by Congress prevents proper legislation by the State for the purpose of conserving its own resources. Your committee feels that under the fundamental law of the land, the State is the owner and should be in control of the use of the waters of its boundary streams, providing, in the exercise of these fundamental rights, the State does not interfere with the navigability of these streams or the efficiency of their conditions for offense or defence. While the State has never delegated to the National Government the right to legislate or to control the use of the water in these rivers, some Congressmen have always claimed this right, and some Federal officials have always been ready to exercise it, and since your Committee has been constituted, and engaged in the investigation of power conditions within the State, there has been continuously pending in the Congress and the National Government some legislation for the purpose of exercising federal control over these natural resources of the State of New York.

On account of this unfortunate disagreement between the Federal and State authorities, efforts on the part of the State to solve its power problems have been greatly interfered with, but your Committee believes that the final exposition of the fundamental law of the land will demonstrate the State's paramount ownership in these natural resources, and, therefore, your Committee has never given up the hope that the Federal Government will eventually recognize these rights, and that an amicable understanding can be reached.

### Tablets at Niagara Falls

The Commissioners of the State Reservation at Niagara have been very conservative in the matter of erecting or permitting the erection of memorials within the reservation. On a recent visit to Niagara, the representative of this Society found only four tablets within the boundaries of the State reserve, namely, two out-of-doors and two in the administration building.

On Prospect Point, at a place called Hennepin View, commanding a superb prospect of the falls, is a tablet bearing the following inscription:

HENNEPIN VIEW
Near this Spot Stood
Father Louis Hennepin
Franciscan Missionary and
Chronicler of La Salle's Expedition
1678–9
He was the first to preach the Gospel on
the Niagara frontier and the first white man
who saw and described the Falls of Niagara.
Erected by the Knights of Columbus, 1910.

In 1917, the Commissioners of the Reservation expressed their appreciation of the services of Charles M. Dow, LL.D., of Jamestown, N. Y., by erecting, in a little nook at the extreme northern end of the reservation overlooking the falls and river, a tablet bearing the following inscription:

This Tablet was Erected by
the Commissioners of the
State Reservation at Niagara
in commemoration of the
Services of
CHARLES M. DOW
President of the Commission
1903–1914
Erected 1917.

The site of the above-mentioned tablet is called Dow View.

In the hallway of the administration building is a tablet commemorating the erection of the building and reading as follows:

Erected
A. D. 1900
State Reservation
at Niagara
*Governor*
Theodore Roosevelt
*Commissioners*
Andrew H. Green
President
George Raines
Charles M. Dow
Thomas P. Kingsford
Alexander J. Porter
*Superintendent*
Thomas V. Welch

On the opposite side of the hallway is a tablet reading as follows:

In Memory of
Andrew H. Green
Commissioner 1883–1903 President 1885–1903

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Thomas V. Welch
Superintendent 1885–1903

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Erected by the Commissioners of the
State Reservation at Niagara
1906

## THE SHIP NIAGARA

### Bill to Save Commodore Perry's Flagship

On December 4, 1917, the Hon. Boies Penrose of Philadelphia introduced in the United States Senate a bill (S. 3063) "for the repair, preservation, care, and future maintenance of the restored historical naval brig *Niagara,* Commodore Oliver Hazard Perry's flagship in the battle of Lake Erie." On January 3, 1918, Hon. Henry A. Clark of Erie, Penn., introduced the same in the House of Representatives (H. R. 7995). The bill reads as follows:

Be it enacted by the Senate and House of Representatives of the United States of America in Congress assembled, That there is hereby appropriated from any money in the Treasury not otherwise appropriated, the sum of $15,000 to be used for the repair, preservation, care, and maintenance of the restored historical naval

brig *Niagara,* Commodore Oliver Hazard Perry's flagship, in which he won the battle of Lake Erie, and which is now fast going to decay in the harbor of Erie, Pennsylvania: Provided, That said restored historical naval vessel shall become the property of the United States, and the City of Erie, Pennsylvania, shall provide free of charge a suitable site to be selected in said city or at the public docks of said city, where a concrete basin shall be built and the vessel set therein with running water around it that can be shut off or on and a gangway built leading from the ship to the shore giving the appearance of the vessel being afloat, historical relics of said battle to be collected and arranged on board and all placed on exhibition free of cost to the public, and a portable deck house shall be built to cover the vessel during the winter months: Provided further, That said sum of $15,000 shall be expended under the direction and supervision of the Secretary of the Navy under such rules and regulations as he may prescribe, and who shall see that the provisions of this Act are carried out at the earliest practicable time to prevent the total decay of said historical naval vessel; and shall include in the estimates he recommends for the naval appropriation act each year a sum sufficient to provide a competent ship keeper for said vessel who shall be paid a fixed monthly salary and be provided with quarters, heat and light and shall reside on board said vessel, who shall be appointed by the Secretary of the Navy from applicants who have been honorably discharged or retired from the naval service and of good character, and for the repair, preservation, care, and maintenance of said historical naval vessel. And provided further, That the Secretary of the Navy shall appoint a local commission of five prominent citizens of the City of Erie, Pennsylvania, who under his direction shall assist in carrying out the provisions of this Act at the earliest practicable time, and who under the direction of the Secretary of the Navy shall have local charge of said vessel, the historical relics of the naval battle kept on board, and the ship keeper; and who shall report semi-annually to the Secretary of the Navy the condition of said vessel and the site on which it sets and make any recommendations necessary for the repair, preservation, care, and maintenance of said historical naval vessel; and the site shall be selected and recommended by said local commission and approved by the Secretary of the Navy: And provided further, That said naval vessel may be used for a local Navy recruiting station in the city of Erie, Pennsylvania, whenever it may be required for that purpose.

The history of the building of the *Niagara* and of its participation in the battle of Lake Erie is told in the preamble to a reso-

lution adopted by the City Council of Erie on December 1, 1917. The substance of the preamble is as follows:

At the end of the year 1812, during the second war of the United States with Great Britain, the great territory of Michigan was in possession of the enemy. The latter, to extend their invasion into Ohio and possibly Pennsylvania, needed to control Lake Erie. In like manner, the Americans needed to control the lake to drive the enemy out of Michigan and to invade Canada. The lake was the key to the situation. Great Britain put a war-fleet on the lake, and it was therefore necessary for the Americans to build one to meet it.

There was but one safe place in which to build it, and that was in Presque Isle Bay in the harbor of Erie, Pennsylvania, one of the finest natural harbors on the Great Lakes. Captain Daniel Dobbins, the ablest navigator on the Lakes, lived at Erie, and he went to Washington and laid before the President and Secretary of the Navy the facts with such force that Presque Isle Bay was chosen as the place at which to build the fleet and he was made sailing master in charge of the work. Commodore Oliver Hazard Perry, who at his own request had been assigned to duty on this lake, went to Erie, March 27, 1813, and found that some of the intended war boats were already on the stocks.

Under the inspiring presence of Perry the fleet was built rapidly, the timber coming from the forests where now the city of Erie stands.

In three and one-half months from the day Perry landed in Erie an American fleet of nine vessels was floating in the harbor, fully equipped and completed for service; even powder was brought six hundred miles in the old Dupont Powder Wagon from Wilmington, Delaware, and much of the way by Indian trails.

The people stood along the shore to watch the fleet as it sailed away.

On the morning of September 10, 1813, the British, with a favorable breeze, came down the lake in battle line, and Perry, rising from a sick bed, went forth to meet the enemy. The opposing fleets were well matched in numbers and equipment. The Americans were served an early dinner. Their decks were dampened and sprinkled with sand, as they would soon be wet with blood.

At a quarter of twelve all the enemy's bands struck up "Rule Britannia" and the battle began, the American flagship *Lawrence* leading the attack. On it the carnage was terrible. Of its one hundred and three men not twenty were able to stand. Perry, with his own hands, fired the last shot from her deck.

A mile away was the twin ship *Niagara* yet unscathed. The American commander, still unhurt, though thought dead, pulled down the pennant which had been given him by an Erie lady, and on which were the immortal words of Lawrence, "Don't give up the ship!" and with a few companions, entered the only row boat still attached to the *Lawrence* and headed for the *Niagara.*

The British commander, twice wounded, but still confident of victory, from the deck of his battered flagship saw the significant move and at once turned the guns of his fleet upon the little boat, and although the boat was hit and the oars splintered, not a man was touched.

On reaching the *Niagara,* Perry hastily rearranged his line of battle, and again raised the battle pennant "Don't give up the ship!" At that moment a fresh breeze drove the new flagship *Niagara* through the enemy's lines, and with broadsides to right and left, she shattered the opposing ships, so that in less than fifteen minutes every opposing flag went down — the first and only time that a British squadron ever surrendered. And since then no nation has raised a hostile flag upon the Great Lakes.

Then Perry took his pencil and, with his cap at rest on his knee, wrote that famous message to General Harrison: "We have met the enemy and they are ours. Two ships, two brigs, one schooner and one sloop."

Shortly the *Lawrence,* the *Niagara* and other ships of the fleet were returned to Erie. And their commander came back in his little boat, the *Ariel.*

The *Niagara* is now the only one left of that fleet. All the rest have been destroyed or lost on the Great Lakes. The *Lawrence* was raised out of the mud in Presque Isle Bay by private parties, taken to Philadelphia during the Centennial there in 1876, placed on exhibition outside the main gate, after which she was broken up and sold for historical relics. The Commonwealth of Pennsylvania then raised from the bottom of Misery Bay, Presque Isle

Harbor, where she had rested for one hundred years, the *Niagara,* so that during the Centennial held in 1913 in the city of Erie and on the lakes in honor of that naval victory, the restored vessel cruised again to the scene of the naval battle and different lake ports.

But the State of Pennsylvania has failed to provide funds for her care and future preservation, and she has recently been transferred by the State and is now the property of the city of Erie. But the people of Erie think she should become the property of the United States and that a grateful government should now provide for her care and future maintenance in Presque Isle Bay, the same as the national government cares for "Old Ironsides," the *Constitution.* The *Niagara* is fast going to decay in Erie harbor, and the City Council, believing it to be the duty of the national government to take charge of and preserve her, as a patriotic inspiration for this and future generations, adopted the following resolution:

"*Resolved,* That the Council of the City of Erie, Pennsylvania, unanimously approves, recommends and prays Congress to enact a law at an early date providing that said restored historical naval brig *Niagara* now the property of said city, shall be transferred and become the property of the United States, which shall provide for the repair, preservation, care, and future maintenance of said naval vessel, on a suitable permanent site on the city harbor front of Presque Isle Bay to be provided by said city free of charge and said vessel shall be transferred by said city to the national government, said site to be selected and approved by the government of the United States."

## ABBEY MEMORIAL AT ENFIELD, CONN.

On Saturday afternoon, November 4, 1916, a very beautiful memorial of Capt. Thomas Abbey, his ancestors, and descendants of the Abbey family, was dedicated with impressive ceremonies in the town of Enfield, Conn. It is located on Enfield Green, almost directly between the classical old Enfield church, which stands on one side of the highway, and the Town Hall, which stands on the other. It consists of a large, circular, paved court, around which, separated by four openings at the cardinal points, are four beautiful marble exedrae, in the center of which, upon a high pedestal, is a marble statue of Capt. Thomas Abbey by Mr. Sherry E. Fry.

The figure represents Capt. Abbey in colonial costume, with long cloak caught up gracefully in his left hand, while he holds a bundle of papers in his right. Behind his feet is represented the "Captain's Drum," which formed the subject of Benjamin Franklin Taylor's poem of that title embodying "a tradition of Enfield, April 20, 1775." (See plates 50–52.)

At the base of the pedestal on one side is the following inscription:

Memorial
of
Captain Thomas Abbey
His Ancestors and Descendants of
(seal)
The Abbey Family
Pathfinders, Soldiers and Pioneer Settlers
of Connecticut, its Western Reserve
in Ohio and the Great West

On the other three sides of the base of the pedestal are given the names of the donors, as follows:

Erected by His Great-Granddaughter
Frances Maria Abbey
Wife of
Joel Francis Freeman
1836–1910
(seal)
Her Sons
Alden Freeman
Member of the Society of the Cincinnati in the State of Connecticut
Francis Austin Freeman
1869–1889
Her Daughters
Edith Freeman Dallett
1871–1914
Gertrude Abbey Freeman
and the granddaughter
Frances Dallett Kissel

On the face of the pedestal is the following inscription:

THOMAS ABBEY

Born April 11, 1731. Died June 3, 1811

A soldier in the French and Indian Wars. Took part in the capture of Fort Ticonderoga, 1758, and the conquest of Canada, 1761. Corporal first regiment, Connecticut troops, May 25 to November 22, 1758. Lieutenant in Captain Seth King's company, April 1 to December 1, 1761.

According to tradition, at the Lexington Alarm in April, 1775, Drummed the congregation out of the meeting house, which stood on this spot. Marched to the relief of Boston with the Enfield Company, led by Major Nathaniel Terry and Captain John Simons, Jr. Lieutenant in Captain Hezekiah Parsons' company, 1775.

May 9, 1776, Appointed by the General Assembly of Connecticut first lieutenant in Captain Abel Pease's company. Served under General Gates at Ticonderoga and vicinity, June to November, 1776. Adjutant Chester's Connecticut State regiment, June to December, 1776. Commissioned Captain January 1, 1777. Appointed by the Council of Safety, February 1, 1777, to Colonel Samuel Wyllys's regiment in New York. Held this command until November 15, 1778.

The meeting house which stood here is now the Town Hall. It was built in 1775 by Isaac Kibbe and succeeded the church which stood on the green one-third mile to the south. There, July 8, 1741, Jonathan Edwards preached the famous sermon, "Sinners in the hands of an angry God."

The other three sides of the pedestal are occupied by Benjamin Franklin Taylor's poem of fifteen verses, entitled "The Captain's Drum. A tradition of Enfield, April 20, 1775."

On the seats forming four arcs of the circular court surrounding the statue are inscriptions in memory of John Abbey, 1612–1690; Thomas Abbey, 1656–1728; Lieutenant Thomas Abbey, 1686–1759; Captain Thomas Abbey, 1731–1811; Peter Abbey, 1769–1857; Lieutenant Seth Alden Abbey, U. S. A., 1798–1880; Colonel Dorrephus Abbey, 1792–1838; Henry Gilbert Abbey, 1821–1887; Edwin Alden Abbey, 1823–1893; Henry Abbey, 1862; and Lieutenant Henry Abbey, Jr., U. S. A., 1887. With each of the inscriptions is at least one seal and sometimes two seals, which in themselves are an interesting study.

The personality and history of those above named and others of the family are described in a finely printed and profusely illustrated volume of 176 pages, entitled "The Abbey Memorial," by Mr. Alden Freeman of East Orange, N. J., printed at "the Abbey Printshop" in East Orange, N. J. In this volume, appreciative tribute is also paid to the late Professor Cleveland Abbe, the eminent astronomer, brother of Dr. Robert Abbe, the celebrated surgeon of New York City, who are of the same family.

The dedication exercises on November 4, 1916, were conducted under the auspices of a committee of about sixty prominent citizens

of Enfield and vicinity, of which Mr. Allen B. Hathaway was chairman. The program was as follows:

Invocation: Rev. David C. Reid, Pastor of the First Congregational Church of Enfield.
Solo: "America." Mme. Florence Mulford of the Metropolitan Opera Co. of New York, accompanied by Gerald Maas on the 'cello.
Historical Address: J. Warren Johnson of Enfield.
Recitation: "The Captain's Drum." Miss Mae E. McKeever of East Orange, N. J.
Remarks: Allen B. Hathaway, Chairman.
Presentation: Alden Freeman of East Orange, N. J., in behalf of the donors.
Acceptance: Albert J. Epstein, First Selectman of Enfield.
Unveiling: Miss Georgiana Abbey Van Epps of East Orange, N. J., great-great-great-granddaughter of Capt. Abbey.
Solo: "The Star Spangled Banner." Mme. Mulford, accompanied by Gerald Maas.
Address: Rabbi Stephen S. Wise of the Free Synagogue, of New York.
Address: William E. Verplanck of Fishkill-on-Hudson, N. Y.
Benediction: Rev. Oliver W. Means of Hartford, Conn., pastor of the Enfield church, 1888–1901.

The exercises were attended by 155 persons, who went by special train from New York, and by a very large gathering of townspeople and visitors from the neighborhood.

## WAR MEMORABILIA FOR PRINCETON UNIVERSITY

### Collection Presented by Benjamin Strong

At the time of the writing of this report, Princeton University is arranging an extremely valuable collection of war memorabilia recently presented to it by Hon. Benjamin Strong, Governor of the Federal Reserve Bank, of New York City. The collection, which was contained in eight large packing cases and which will be augmented from time to time, includes over 100 bound volumes of clippings pertaining to the war from the New York *Times, Sun,* and *Evening Post.* These volumes will be supplemented by others until the war is ended, so that they will constitute a current history of the publicly known events of the great struggle. The Strong collection also includes a nearly complete collection of British war

posters, a large number of French posters, and a few from Italy and Belgium. In addition to these, there are about 150 specimens of war emergency currency from France, Great Britain, Germany, and the Netherlands. There are also complete files of the Congressional Record, the London *Gazette* and the Official Bulletin published by the United States Government, and an almost complete set of *Lokal Anzeiger*. There are several hundred books, pamphlets, booklets, photographic reproductions and other propaganda material, issued principally in Great Britain and France, and minor miscellaneous matter, bread tickets, etc., as well as Liberty Loan and War Savings data.*

## OLD BLOCKHOUSE AT INDEPENDENCE, PA., RAZED

In December, 1917, announcement was made that Doddridge's blockhouse, a landmark of what was once the frontier, at Independence, Washington county, Penn., had been razed to make room for agriculture. There are few such historical structures remaining to mark what was once the forefront of civilization in the eastern states, and the loss of Doddridge's blockhouse is much to be regretted. The five-sided stone and brick blockhouse of Fort Pitt in the city of Pittsburgh, Penn., is the best remaining monument of this class. Doddridge's blockhouse was a log structure and, excepting Fort Pitt, was the last of a long chain of blockhouses and forts erected by the pioneers in Western Pennsylvania to stop the raids of the hostile Indians from the Ohio country.

This historic old blockhouse was the main building of Doddridge's Fort, one of the most important on the old frontier. The Pittsburgh *Dispatch* says that it was erected in 1773 by John Doddridge, who had crossed the mountains from eastern Pennsylvania with his wife and children, to seek a new home in the western wilderness. He settled in what is now Independence township, where he built a log fort, which was famous for many years as a gathering place for the settlers.

The white settlers sought shelter behind its walls many times. One such incident, which occurred in September, 1782, is recalled by the Pittsburgh *Dispatch* to illustrate the reign of terror under

* We understand that the University of the State of New York has for some time been making a collection of war posters and similar data.

which the settlers lived. Word reached Doddridge's that the Indians had attacked Rice's Fort on Buffalo Creek, only a few miles away. The settlers expected that Doddridge's would be attacked next, and runners were sent out to spread the alarm.

Captain Samuel Teter, an old Indian fighter, who had served in Braddock's and Forbes's campaigns, took command of the defense. He divided the powder and lead among the men, and gave directions for running the bullets and using patches that would prevent the guns from choking. He ordered men to have their guns well oiled and their flints sharp. The women were told to fill every vessel with water from the spring, which is still in use, to be used in putting out fire if the Indians should attempt to burn the buildings.

At that time Doddridge's son was thirteen or fourteen years old, but he ranked as a fort soldier. After putting his arms and equipment in order he went into the garret of his father's house (the blockhouse which has just been razed), and lay down, with his rifle by his side, expecting to be awakened by the report of guns at daybreak. The next morning, however, the alarm had passed, for the Indians had been defeated at Rice's, and so they gave up their raid. The next day young Doddridge found the trail of a large war party within a mile of his father's fort.

## MONUMENT TO ADAM, NEAR BALTIMORE, MD.

One of the most curious monuments that has come to our attention during the past year is one erected on the lawn of a private family living about five miles from the city of Baltimore, Md. It is a concrete shaft, about four feet high, bearing the simple inscription:

To the
Memory of
ADAM
The First Man

The man who erected the monument first sought a place in the city of Baltimore for a memorial to the traditional founder of the race, but the municipal authorities did not view the project favorably, and he then put up the monument on his own lawn in the suburbs. He is quoted as saying:

"After all, why shouldn't Adam have a memorial? He belongs to all of us, and in my opinion he is entitled to be honored by the whole world as the father of us all, and I do hope that my example will be followed and a grand work of art set up in his honor."

The same man later erected a smaller shaft close by as a monument to the memory of the American Constitution which he claimed had been killed by certain legislation.

## ICONOCLASM AT WASHINGTON, D. C.

### Hon. Champ Clark's Opinion of Statuary Hall

A remark, jocosely iconoclastic, attributed to Hon. Champ Clark, called attention in January, 1918, to the wide range of artistic merit of the memorials in Statuary Hall — the old Hall of Representatives — in the Capitol at Washington, D. C. The use of this room as an "art gallery" is due to the suggestion of the late Senator Justin S. Morrill, when he was a Representative from the State of Vermont, which resulted in a resolution adopted by Congress in 1864 inviting each State in the Union to send marble or bronze statues of two of her most illustrious sons for the national group. Certain statues and busts owned by the Federal government were used as a nucleus for the collection, and about half the states have sent the invited memorials. Some of them are of artistic merit, but most of them are works of mediocre ability, or worse, and in their unfavorable setting "look like a lot of gravestones exposed for sale in a dealer's wareroom" according to the standard guide-book of Washington.

On Saturday evening, January 12, 1918, Mr. Clark made a speech at a dinner celebrating the 100th anniversary of Missouri's petition for admission to statehood, and in speaking of the collection of effigies in Statuary Hall, in the midst of which stand statues of Senator Frank P. Blair (1821–1876) and Senator Thomas H. Benton (1782–1858) of Missouri, he is reported to have said: "I'll contribute $100 if anybody will go into Statuary Hall some night with a sledge hammer and put half those statues out of business."

Considering the motives prompting this declaration and the end in view, Mr. Clark's remark may be characterized as an expression of "benevolent iconoclasm."

### Would Destroy Statue of Frederick the Great

In early February, 1918, Robert McNutt McElroy, Ph.D., head of the department of history and politics at Princeton University, was reported to have stated at a luncheon in New York City that he was going to start a movement to tear down the statue of Frederick the Great in front of the War College in Washington and melt it into bullets. As nothing has been heard of any movement designed to carry the suggestion into practical effect except some comment in the newspapers, it may be inferred that the Professor's remark was an expression of what might be called "figurative iconoclasm" to express the speaker's views of the man whom he characterized as "the head devil of the whole Prussian philosophy."

The statue of Frederick the Great is a replica of the statue by Prof. T. Uphues which stands in the Siegesalle in Berlin. It was presented to the United States during President Roosevelt's administration by the Kaiser, after the visit of Prince Henry, the Kaiser's brother, to this country. The figure is of heroic size, and represents the subject in a cocked hat, with unbuttoned coat thrown open, and with his extended right hand resting on a walking stick. It stands on a pedestal provided by Congress.*

### A New Du Pont Memorial

An example of what may be classified as "progressive iconoclasm"— for it is manifest that there are different kinds of statue-shattering — is afforded by the action of the Du Pont family in deciding to remove the unsatisfactory bronze statue of Admiral Samuel F. Du Pont which stands in Du Pont Circle. The statue was designed by Launt Thompson. It is announced that the monument is soon to give way to a splendid commemorative Du Pont fountain done by Daniel Chester French, of New York, at the expense of the General's descendants and second and third cousins.

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* On April 13, 1918, the statue was removed from its pedestal and stored in the cellar of the War College.

## CADILLAC MEMORIAL CHAIR AT DETROIT

Probably more people in the United States know "Cadillac" as the name of a motor car than know it as the name of the founder of the city of Detroit, Mich. The memory of the latter is perpetuated in that city by a monument out of the usual order, consisting of a high, brown-stone chair, set up in the middle of one of Detroit's busiest streets. It is said to be a copy of the chair in which Cadillac sat when he signed the charter for the city. The founder of Detroit was born in Gascony of a noble French family. He spent some time in Acadia as a captain in the French army. In 1694 he was appointed by Frontenac to the command of Michilimackinac. There he remained for several years and during this time he laid before King Louis XIV a plan for a permanent settlement of Detroit as a trading post of the Northwest. With the King's approval he founded the city in 1701. Its inhabitants at that time consisted of fifty settlers and fifty soldiers. Later Cadillac became the Governor of Louisiana, afterward returning to France, where he died.

## THE PASSING OF FORT WINNEBAGO

### Only the Fort Well Left as a Landmark

From Mr. O. D. Brandenburg of Madison, Wis., who has a keen appreciation of the value of historical landmarks, we learn the following interesting facts concerning the disappearance of old Fort Winnebago at Portage, Wis. Mr. Brandenburg considers this distinctly one of the most historic spots in all Wisconsin.

Fort Winnebago was established for the purpose of holding in check the restless Winnebago Indians. They were a treacherous tribe, guilty of many small massacres widely separated, and the presence of troops in the heart of their country was deemed essential to the safety of the region. It also served as a protection to the traders of the American Fur Company, of which John Jacob Astor was the head. In those times the fort lay on the leading thoroughfare of all the northwest. Here the head waters of the Fox river come within a mile and a half of the Wisconsin. The space between the two rivers was a low, level region often so flooded as to make it all but possible for the canoes of the early voyagers and Indians to pass from one stream to the other. As

a matter of fact, they had to take their canoes out of the water and carry them across, hence the name Portage. It was the connection between the great lakes and the Mississippi river, between Quebec, through these two water courses, and Ft. Crawford near Prairie du Chien, and the far reaches of the Mississippi north and south. Over this route went practically all the notables of the pioneer days in Wisconsin.

The old fort was a formidable affair consisting of a high picketed stockade and stout blockhouses on diagonal corners that commanded the entire enclosure. Within were a two-story armory and a guardhouse, both having dormer windows. For the time and place, they really were big buildings. There were officers' quarters, barracks, etc., in addition.

To-day nothing remains of Fort Winnebago except the sandy soil on which it stood and the old well. This well, 40 feet deep and about 10 feet broad, marks identically the central point around which ran the old rectangular stockade. Now, dilapidated farm buildings of later date are round about and a new dwelling to take the place of one recently burned is in process of construction near by the well. Over the well are heavy, warped, oaken planks, through the broad cracks of which the water shimmers far below just as it did 80-odd years ago.

The big well, which is the solitary link connecting the present with the past at Fort Winnebago, is still in use, a modern windmill now drawing the water as it was done no doubt by windlass and the old oaken bucket some 90 years ago.

The buildings of the fort are all gone. Not a foundation stone remains in place, yet from 1829 to 1845 there were numerous buildings, mostly frame structures, and many of them two-storied, well constructed of sawed lumber. The icehouse was of stone. The lumber came from pine logs rafted down not far from the Necedah region on Yellow river, 50 miles or more from Portage, by Jefferson Davis, then a young lieutenant, later President of the Confederate States. In the construction of the fort it was Davis' special mission to go into the midst of the virgin pine on the Yellow river, the finest in Wisconsin, and get hundreds of these wonderful logs down for the building of the fort.

The last building to go was the commissary, a structure about 50 feet long and 30 wide, at the foot of a gentle hill just below

the fort, close beside the Fox river. Into it provisions were unloaded from the boats, bateaux and canoes coming up the Fox. It was yet standing, badly dilapidated, a dozen years ago. Now all that remain are the cellar and scattering pieces of brick with mortar attached. Across the old military highway from the stockaded fort in the '30's and for fifteen years after, were the surgeons' quarters, a commodious two-story building, and a hospital. It is said that the farm building there to-day includes a portion of one of these old edifices — which one, local historians are unable to say. Outside the fort near this hospital group was the bakery, a one-story structure, and a stone icehouse, half buried in the ground. Ice for this house was not obtained from the Fox river only a few rods away, but came from Swan Lake, four miles distant. A sutler's store of logs was just across the military road from the commissary.

On a sand spit in a marsh not far from the fort was the blacksmith shop. Like all the other structures it has disappeared. Not a stone or timber remains, but in the sand over which it stood are abundant evidences of the uses to which the place was put — small scraps of iron, some as big as one's two fingers, and hand-wrought nails by the hundred. A rake pulled through the sand over an area of 30 feet square doubtless would bring to light horseshoes and other articles characteristic of smithies of the kind. From 1830 to 1845, this blacksmith shop, like that at every other frontier post, was a place where guns were repaired, tomahawks and axes sharpened, and spears given a new edge, quite as much as horses shod or tires ironed. This old blacksmith locale should form a most alluring spot for the antiquarian.

Most of the Fort Winnebago buildings were standing in 1871, but sadly dismantled and decayed. Nothing but the commissary remained in 1900, and it stood, its roof fallen, for some time after. The old chapel was carried off piecemeal and is now a farm building not far away. Other lumber went for similar purposes. In 1856 a fire destroyed some of the quarters. Decay and commercialism have taken the rest. The reservation embraced two sections. The fort was evacuated in 1845 and in 1853 was sold by order of the Secretary of War, Jefferson Davis.

Nearly a mile east of the fort was the military cemetery. This, too, is very historic. Many notables were buried here, and some

are resting there to-day, while others were removed. Major Nathan Clark and Captain Gideon Low, officers connected with the fort in early days, were first placed there, but their bodies were later removed elsewhere. Robert Irwin, Indian agent, was buried there in 1833. So were Captain William Wier and others of the Wier family. There lies Cooper Pixley, a revolutionary soldier, who died in 1855, aged nearly 87 years old. John Sylvester, a hero of 1812, who rests there, became the first mayor of Portage. He died in 1855, aged 68. John Clough, another soldier of 1812, is there, and Henry Carpenter, who fought in the Black Hawk war of 1832 as a member of the Fifth U. S. Infantry. In short, buried there among scores of others are the soldiers of five wars: Revolutionary, 1812, Black Hawk, Mexican and Civil. Monuments and markers are over many graves, but during pioneer times privates were interred with nothing for identification.

The cemetery is a government reservation to-day and is reasonably well cared for, but it has been a long time since an interment occurred there. It might well have become a part of the city cemetery of Portage, a mile or so away, since it is located on an elevation sufficiently high above the great expanse of level marsh roundabout to command an impressive view of the stately Baraboo bluffs fringing the Wisconsin river in one direction and big hills in the other. It is a sightly location, and of large historic significance, but the people of Portage located their necropolis far away on the other side of the city.

The history of Portage would be a great part of the history of Wisconsin and the west. Two of the most celebrated personages who crossed this portage were Joliet and Marquette, who made the passage in 1673 and who, at the mouth of the Wisconsin, discovered the upper waters of the Mississippi which La Salle subsequently explored to its mouth.

## PROPOSED PIONEERS' HALL OF FAME

### Death of William F. Cody, "Buffalo Bill"

The death of Col. William F. Cody at Denver, Colo., on January 10, 1917, has led to an ambitious project for the erection, on the top of Lookout Mountain, Colorado, of a great structure in

memory of America's great pioneers. Among those, in addition to Col. Cody, whose fame it is proposed to enshrine in this Pioneers' Hall of Fame, are

Columbus, discoverer of America.
De Soto, discoverer of the Mississippi, Missouri and White rivers.
Coronado, explorer of the southwest.
Menendez, explorer of Florida.
Champlain, discoverer of Lakes Champlain, Ontario and Huron.
Cartier, explorer of the St. Lawrence river.
Captain John Smith, navigator and explorer of the Atlantic coast.
William Blackstone, founder of Shawmut (Boston).
Peter Stuyvesant, "founder" of New Amsterdam, New York.*
Marquette and Joliet, discoverers of the upper waters of the Mississippi.
William Penn, founder of Pennsylvania.
La Salle, explorer of the Mississippi river.
Daniel Boone, Kentucky pioneer.
Gen. George Rogers Clarke, who "explored country south of the Ohio."
Padre Escalante, explorer of southwestern Colorado.
Gen. Daniel Morgan, pioneer settler in the Monongahela district.
Rufus Putnam, founder of town and fort now Cincinnati.
David Crockett, hero, statesman, martyr, who was massacred at the siege of the Alamo.
Samuel Houston, first President of the Republic of Texas.
Bill Bent and his brother, Charles Bent, explorers of Arizona and New Mexico.
Capt. John Augustus Sutter and James Marshall, discoverers of gold in California in 1848.
Capt. Meriwether Lewis and Capt. William Clark, transcontinental explorers.
Amos Lawrence Lovejoy, a pioneer settler of Oregon.
Capt. Zebulon Montgomery Pike, discoverer of Pike's Peak.
Robert McClelland, who established the first trading station on the Missouri.
Kit Carson, explorer of the Yellowstone district and guide of General Fremont.
John C. Fremont, the "pathfinder."
Joseph Smith, who planted the first colony in Utah.
Capt. John W. Gunnison, explorer of Utah.

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* The listing of Peter Stuyvesant as "founder" of New Amsterdam is an interesting indication of the western view of eastern history. It is also to be noted that Verrazzano's and Hudson's claims to fame are passed over.

Edward Creighton, who completed the Pacific telegraph from coast to coast October 24, 1861.
Gen. George A. Carter, Indian fighter.

The foregoing list is somewhat miscellaneous, but gives an interesting idea of the names regarded by the projectors as worthy of national distinction in association with that of Cody.

There is no doubt about Col. Cody's having been a picturesque and popular figure, and he represented a period of American development which has now passed into history. He was born near Leclair, Iowa, on February 26, 1845. In 1852, his family traveled in one of the "prairie schooners" of the period to Kansas. Two years later young Cody's father died from a wound received after making an anti-slavery speech.

At the age of 10, the boy, whose full name was William Frederick Cody, became the "man of the family," and at the age of 11 shot his first Indian. Before he was 16 he had become noted as a pony express rider, having made a record of the longest, best-ridden non-stop trip of 322 miles in 21 hours and 30 minutes. Later he became chief of scouts of the United States Army, and became famous by his work in the west. He was a great aid to Generals Sheridan and Custer, and both as a fighter and as chief arbitrator for the Indian, he rendered invaluable service to the Government. One of the picturesque incidents in his career was his duel with Yellow Hand, chief of the Cheyennes. Cody allowed his hair to grow long, and he was known among the Indians as "Pahaska," the long-haired. His daring exploits were subjects of many a thrilling story of Indian and frontier life.

With the subjection of the hostile tribes, Col. Cody's scouting activities gradually ceased, and in 1883 he began his public performances interpreting the west as he knew it. His first performance was at Omaha, and won instant popularity for "Buffalo Bill's Wild West Show." It is said that slurs cast upon Cody's Indians by the Germans at that time have never been forgotten and give a particular zest to the brave deeds of the American Indians serving with the United States forces in the present war.

This title, "Buffalo Bill," recalls one of the regrettable features of those days — the extermination of the buffaloes. He earned this pseudonym by his activities on the plains when, to fill a con-

tract to supply the Union Pacific railroad with buffalo meat, he killed 4,820 buffaloes in 18 months. In one afternoon he made a world's record by killing 69 buffaloes.

In 1886 he went to Europe with his show and made a great sensation in England and elsewhere.

For the Pioneers' Hall of Fame, Messrs. Gove & Walsh, architects of Denver, Colo., have made a tentative design. It contemplates a great raised plaza on the top of Lookout Mountain, upon which is to stand a monumental building, surmounted by a great dome and cupola. An equestrian statue of Cody is to stand on the plaza in front of the Hall of Fame, and within the building are to be a library and provision for various forms of memorials. It is estimated that the total cost of the structure will be $1,000,000. Col. J. W. Springer of Denver, Colorado, is President of the Cody Memorial Association, Inc.

## MONUMENT TO THE GULLS OF SALT LAKE CITY

Monuments to faithful dogs and to favorite or historical horses are not unusual, but the only monument to birds, to our knowledge, is in Salt Lake City, Utah. This is a monument, recently erected, in honor of the sea-gulls which saved the crops of the Mormons in the early days of their colony in Utah.

The event commemorated occurred soon after the Mormons settled in the Wasatch valley. One season when the crops were nearly ripe, myriads of grasshoppers descended upon them like a biblical plague, and threatened to destroy them. The Mormons prayed that their crops might be saved so that they might not perish with famine; and as if in response to their petitions a great flock of sea-gulls came from Great Salt Lake during the night, and in the morning were discovered destroying the grasshoppers. The crops were saved as if by a miracle.

The monument commemorating this deliverance consists of a Doric column of white marble surmounted by a large ball upon which sit two bronze gulls. The story of the gulls is told in four bronze panels on the base of the monument: First, the coming of the Mormons and their sowing the crops; second, the ripening crops covered with grasshoppers, with the Mormons at prayer; third, the coming of the gulls, thus saving the crops; fourth, the

people at prayer, and making plans for the future protection of the birds.

Immediately after their deliverance the Mormons put a law on their statute books making it a criminal offence to kill one of these birds — a law which is rigidly adhered to throughout the State.

The memorial to the birds stands in the Temple yard not far from the great Tabernacle and is greatly admired by art lovers. Every day tourists gather about the shaft and listen to the stories of the joys and sorrows of the early settlers of this now fertile country. One of the Mormon Elders usually does the lecturing.

Owing to the legal protection of the gulls, hundreds of them from the Great Salt Lake fly over the city and are so tame that they often alight at one's feet.

The story of the sea-gulls of Salt Lake City has an interesting significance to the student of folk-lore, for it illustrates perfectly the origin of the traditions which are so frequently attached to "sacred animals" of various peoples.

## BEAUTIFUL SMOKE-STACK AT SALT LAKE CITY

Salt Lake City also has another art distinction, and one that may well serve as an example to other cities of older history. It is an ornamental smoke-stack on a power-house. The chimney has been so completely disguised that anyone unacquainted with the plant and the purpose of the stack would not be likely to suspect its function. It resembles the minaret of some Turkish mosque. The lower half is of stone construction with the smoke vent through the center. The upper half is extended as a tubular steel chimney surmounting a crown-shaped dome of metal. This dome serves as a roof for the observation platform for visitors, greatly adding to the appearance of the tower and completing the illusion. The entire city and landscape for miles around can be seen from the platform.

## MONUMENT TO BASE-BALL, AT SAN FRANCISCO

A statue of a base-ball player in Golden Gate Park, San Francisco, is an expression of American life in American art which will interest the art world as well as the base-ball world. While some

form of the game of ball has been played probably by every people on the face of the earth, and was played by the American Indians, base-ball is a strictly modern American game and has reached such a state of scientific perfection and such a degree of popularity that it has quite appropriately been called the American national game. Its delineation in sculpture, therefore, is quite as appropriate as the representation of the Greek game of disc throwing in the famous figure of Discobolos.

The San Francisco statue was given by a donor whose name is not known to the public, and is dedicated to industry and ability. The figure was modeled from life and is an excellent likeness of John Montgomery Ward, the expert infielder of the New York team of a quarter of a century ago. It shows him in the act of delivering a ball. The figure and base are of gray granite. Standing in a bower of Australian pines the statue forms a splendid picture of youth and energy, and is regarded as one of San Francisco's most attractive statues.*

## NEW MUSEUM AT SANTA FE, N. M.

### Historical Summary of Southwestern Archaeology

A new American museum of exceptional interest was dedicated in the city of Santa Fe, N. M., with exercises beginning November 24, 1917, and lasting until the evening of Thanksgiving day. The building, which is called the Temple of St. Francis and the Martyrs, is an example of a distinctive school of American architecture. Six of the ancient Franciscan mission churches, three hundred years old, are reproduced in its facade, without destroying the unity of its appearance; they are Acoma, San Felipe, Cochiti, Laguna, Santa Ana and Pecos. Two of these great missions have passed away, while the others are slowly yielding to the ravages of time.

The outlines of the new museum are described as terraced, plastic, flowing. There are no hard and stiff plumb lines or levels, and no exact repetitions or parallelisms, such as mark the California mission style. The symmetry is that of mass, not of exact form. No matter which way one looks, or from what vantage point, there is a different architectural composition.

* In Laurel Hill cemetery, at Philadelphia, Penn., there is a statue of Wright, the "father of base-ball." It shows him in conventional dress.

A lovely patio is in keeping with massive battlements, shady cloisters, carved corbels and primitive pillars and vigas; and the architect has endeavored to blend into a harmonious whole the ceilings of the interior, the floors of the St. Francis Auditorium, the benches, the great St. Francis mural paintings, the lighting of the transept, the carving of the grills, the reproduction of the massive doors of Santa Clara and of the Needle's Eye.

The new museum is an art gallery, being part of the Museum of New Mexico, whose priceless archaeological and historical collections are housed in the Palace of the Governors. Here the Taos and Santa Fe art colonies, now numbering some forty artists of national and international note, first exhibit their paintings, which later are shown in New York, in Philadelphia and in Chicago. Already it is the center of a new art movement, as thoroughly American as the architecture of the building itself.

The Hon. Frank Springer, who delivered one of the principal addresses on the occasion of the dedication, gave an instructive summary of the progress of archaeology in the southwest, and paid a merited tribute to one who had a leading part in the building of the new museum. He said in part:

"Something has been said, in a personal sense, touching the credit for the creation of this great monument. But its successful achievement is not to be deemed the work of any individual. It is due to the united effort of many people of this commonwealth — especially to the broad-minded liberality of the Legislature, which authorized its construction; to the people of Santa Fe, through their Boards of Education and County Commissioners, who provided the site, and to her noble women, who stand for all that is fine and good in this community; to the persons, residents of or interested in the State, who contributed the additional funds required for its completion; and to the Builder, through whose genius it has arisen from the earth.

"To this statement, however, there must be one exception. Such an achievement involves more than the hewing of timber or the laying of brick. Behind these must be the conception, and the driving force to push it forward. In ancient Egypt and Assyria pyramids and temples arose at the monarch's nod, out of the blood and sweat of multitudes, at a cost in human misery only exceeded by that of war. But in these times the force which avails is not the lash or the goad, but is that of enlightened public sentiment, inspired and led by those who chiefly think for that

public. And if we trace the history of such events as this to their real beginnings, it will be found that always they are the culmination of a series of efforts initiated by some one of prophetic vision and inborn leadership.

" Of this rule the present case is a good example. And to better explain what I mean, it will be profitable to take a brief retrospect of the activities in southwestern archaeology leading up to the state of public interest which makes an event like this possible. These will fall readily into three epochs, almost comparable to the great periods of general intellectual history: First — Pioneer scientific investigation; second — Vandalism, marked by indifference, neglect and destruction; third — the Renaissance — the rise of Systematic Research.

" The first thoroughly scientific study of southwestern Archaeology was made by William H. Holmes, in connection with the government surveys under Hayden in 1874 and 1875. He has never found time enough since to stop working, and as the head of the division of Anthropology in the Smithsonian Institution and the honored Chairman of the Managing Committee of the School of American Research, he is still the busiest man of either. He explored the Southwest, its mountains, its canyons and its trails, not only for traces of ancient man, but also for the still more ancient works of nature herself. And to his untiring search they yielded up their choicest secrets — among them that of perpetual youth. We know that he tramped them good and hard, for his tracks may still be found throughout an area of six thousand square miles in southern Colorado and Utah, northern Arizona and New Mexico, traversed by him in those early years; and when to this day we wish for fundamental knowledge concerning the cliff houses of the Mancos, the La Plata, and the Mesa Verde, and other prehistoric remains from there down to Abiquiu in New Mexico, we may find it all, with graphic illustration and accurate scientific interpretation, in the chapters prepared by Holmes for the volumes of the Hayden Survey. And the marks of his hammer can yet be seen along the great Jura-Trias and Cretaceous exposures of the San Juan and Grand Canyon regions, where he made the fine geological and topographical sketches contained in the same Hayden Reports. The original drawings for many of these hang next to my office in the corridor of the National Museum; and it is a daily pleasure, as I approach my own door, to stop and enjoy these marvelous panoramic sections, not only as reminders of the great West which was my home before they were made, but still more for their masterly delineation of the stupendous geological features of that region.

"After Holmes came the more definite researches of Adolph Bandelier, from 1880 to 1890, under the auspices of the Archaeological Institute of America. Although he was for many years a resident of Santa Fé, where much of his work was done and most of his reports prepared, probably not six persons out of the entire population of the city realized that this quiet and unpretentious worker was engaged in producing a series of volumes that are among the most important ever written about the southwest. His reports are the indispensable text books that every beginner carries into the field to this day. His explorations included the whole Rio Grande drainage, southern Arizona and California. Bandelier was the pioneer in intensive archive research in the Southwest; and his word-pictures of the Cliff Dwellers and their remains, both in the domain of Science and of Fiction, served to draw attention to these mysterious antiquities here in our midst, and their relation to the surviving aboriginal populations, with a clarity and vividness that have never been excelled.

"The two men I have mentioned are the outstanding figures in the earliest archaeological work of the Southwest. They were followed by Fewkes, for the Hemenway Expedition, and later for the United States Government — the first systematic excavator in the Southwest. His main field in the early days was Arizona, but in later years he has covered practically the entire region.

"These three pioneers laid the foundation for all future archaeological work in the Southwest. Between them they established the essential activities of the science:— exploration, excavation, archive investigation, and the study of the surviving peoples.

"Nevertheless, their published works, chiefly buried in ponderous volumes of government reports which few people read, were to a great extent soon forgotten. And to the majority of the people of New Mexico, who of all others were most vitally interested in these investigations, the records of them remained as unexplored as the regions to which they related had been before. After a time, however, attention to the relics of antiquity was aroused by the discovery that they had a commercial value, and under that stimulus digging began afresh with a vigor never previously known. Beginning with the years just preceding the World's Fair at Chicago, and lasting approximately a decade and a half, an epoch of vandalism reigned. For the purpose of securing enormous collections for exhibition and sale, the ruins of Colorado, Utah, Arizona and New Mexico were looted without restraint. Not only so, but in the rush to obtain specimens there was wholesale destruction of the ancient works of architecture. Of preservation there was no thought, except to preserve the secret of the finds from possible rival despoilers. Still less was there any pretence

of scientific record of the occurrence of the objects removed. It is important to note that this mercenary activity was not confined to private individuals. Expeditions were organized for its prosecution, and there was marked indifference, if not actual participation, in some of these depredations, by museums seeking to fill their cases, and ignoring the higher motives of scientific research.

"While the reign of the unregulated specimen hunter was yet in force, there came into this field a young man by whom the works of Holmes, Bandelier and Fewkes had not been overlooked. The musty volumes of public documents in which their reports were contained had for him no forbidding aspect, but to his active and inquisitive mind their perusal opened up the vista of a great subject, fit to become a lifetime work; and to this work he resolved to devote the energies of his best years. He saw the possibilities which lay in the little known area of pre-historic occupation in northern New Mexico, and he entered upon its study with the zeal of a scientific enthusiast. The exploration of these remains of a vanished culture, the preservation of the facts concerning them by authentic records, and the bringing of them to public attention, became to him a fixed and definite purpose; and from that purpose he has never deviated to this hour.

"He came from a neighboring state, where he was already a teacher of teachers, to teach us about our own country many things we knew not of; and he was soon annexed by our aspiring young-old commonwealth and placed at the head of one of its leading educational institutions. He became the inspirer of others, not only of his students and the teachers under him, who gave up their vacations to become volunteer aids to his researches, but of men of affairs and position as well — among them the Chairman of the Public Lands Committee of the United States House of Representatives, who came out here at his invitation, camped and climbed with him among the trails and canyons of the Pajarito Plateau, until he verified the facts which had been reported as to the importance of these remains, and the necessity for their protection. To this end a sharp campaign was begun in the latter part of 1903. The history of that campaign is largely an unwritten story, for the most part buried in the archives of the executive departments at Washington. But it is within my personal knowledge that at the request of this same chairman our young archaeologist prepared, and by his persistent energy was largely instrumental in securing the passage of, the law which brought to the protection of these relics of vanished peoples the strong hand of the Federal Government, and brought to an end the reign of vandalism which forms the second epoch of our brief historic survey.

"The credit for inaugurating the new period which succeeded it belongs to a local institution, the Normal University at Las Vegas. From the time it opened its doors in October, 1898, its Board of Regents and faculty, under the inspiration and leadership of this teacher of teachers, then its President, held that original research was a vital factor in the education of every individual — pre-eminently so in the education of teachers. Accordingly it emphasized such research, especially in the sciences bearing immeditely upon life and culture. Its work in Biology and Anthropology was of an order for which its resources would have been wholly inadequate, had they not been supplemented by the energy and infectious enthusiasm of a master spirit. In connection with the latter, the wealth of local New Mexico material was fully recognized. Lecture courses in southwestern archaeology were offered; the New Mexico Archaeological Society was organized at Santa Fé in the fall of 1898; in the summer of 1899 the exploration and excavation of the Cliff Dwellings of the Pajarito Plateau were commenced under the President, aided by a class of ten students and members of the faculty, they paying, as he did, their own personal expenses. The work was hard, and water often scarce in some of those arid places, where once great peoples lived and thrived; but doubtless to those young devotees, stimulated by the sensation of new discoveries, it seemed better than red Falernian wine. With the meagre funds that could be furnished by the institution, and the labors of volunteers like these, the work went on during the summer vacations, every year for five years. During that time the first authentic survey and map of the region were made; extensive representative collections were secured; prospecting trenches were dug, and sketches based upon them were prepared to indicate the probable form, size and position of the more important communal buildings, which subsequent investigations have fully verified. Evidence of these researches, in the shape of typical collections and the original maps and drawings made at that time, now form a part of the records of the Museum of New Mexico, and may be seen in the various rooms of the Old Palace.

"With these expeditions of the Normal University, during the first five years of its existence, was ushered in the third epoch of our retrospective sketch — that of Systematic Research.

"The work thus done attracted the attention of the Interior Department and the Smithsonian Institution. Inspectors were sent out from Washington to report on the New Mexico ruins, and the Normal University became the recognized local adviser of the Government in all its preliminary investigations. Some of the pamphlets of information furnished by it, published in 1904, ran to tens of thousands of copies. By means of all these activities

an assemblage of facts was made for presentation to Congress, which led directly to the enactment of the law for the preservation of American antiquities in 1906.

"Meanwhile our archaeologist, always himself a doer, at intervals between his doing dreamed dreams as well. And as he rested among the caves of Pajaritan cliffs — attended, perchance, by the ghostly company of Pajaritan sages — looking up to the blue firmament, and inquiring of the stars which had shone on them and him alike, there came to his mind visions of comprehensive and reverent studies of those forgotten peoples who lived, strove, and perished before our time upon this continent; of some kind of institution located in our midst by which such studies might be fostered and directed; whose activities, perhaps centering in and radiating from this ancient capital, might become of continental extent; and in which the evidence of these little known things might be brought within convenient reach, and knowledge of them diffused, for the enlightenment and benefit of all the people. A year of exploration in Mexico, under the auspices of the Archaeological Institute, confirmed his impressions as to the immensity of the unworked field which lay open for research within our own continent. These various labors had by this time gained for him the confidence and powerful support of President Kelsey of the Archaeological Institute of America, Miss Alice C. Fletcher of the American Committee of the Institute, and Dr. Charles F. Lummis, a member of its Governing Council, which resulted in his appointment as Director of American Archaeology in 1906. And to the unwavering and active cooperation of these four persons, backed by the encouragement of that great and broad-minded scientist, Professor F. W. Putnam of Harvard, more than to any other influence, is due the position of American Archaeology as a truly national science. The necessity of systematically organized effort towards its effectual prosecution became clearly apparent to these far-sighted co-laborers, and by their efforts there was brought to the Science of Archaeology in America, and the larger concept growing out of it, the Science of Man, what they never had before — organization and a definite purpose.

"Thus was born the idea of an institution for research of this nature in laboratory and field, where students of Archaeology and related Sciences might be directed and trained for original works of their own; and in 1907 the establishment of the School of American Archaeology, now called the School of American Research, was ordered by the Council of the Institute. But the definite conception of such a council, by the common and willing consent of all connected with it, must be credited to the earned and gracious lady whose name I have mentioned, who was for the

first five years the active Chairman of its Managing Committee, and who is now, and for uncounted years to come will be, its Chairman emeritus.

"Through the influence of the newly-appointed director solely, and against the competition of other localities having much more to offer in the way of material support, the seat of this School, as the headquarters of organized archaeological research on the American continent, was located at Santa Fé. Under the infection of his enthusiasm, men in other walks of life who knew nothing of Archaeology, or if they knew entertained it as the curious theme of an idle moment, discovered in its objects something worthy of serious thought and willingly enrolled in the goodly company of dreamers and doers under his leadership. By his efforts, aided by those who caught their inspiration from him, the Museum of New Mexico was created upon a far-reaching plan of cooperation with the School of American Archaeology, such as would give to it a nation-wide importance and prestige, and would make this city the official seat from which its work should be carried from time to time into other American fields. And thus the vision of the dreamer became a crowning fact.

"The same controlling personality has guided the subsequent course of these institutions; their work now embraces the continent; their names have become synonyms for practical efficiency and results achieved; and he who directed may well be content to let the results speak for him. The project for an exhibit at San Diego to illustrate the whole Science of Man — historic, prehistoric, artistic and biologic — which has gained the unbounded admiration of the most eminent men of this nation, when first presented by him at a meeting of sober-minded and prudent scientists, was pronounced, in so many words, an irridescent dream. Nevertheless, he made the dream come true. In that dream and its realization, New Mexico has shared. Stimulated by its influence other men dreamed, and took courage for splendid things; and out of their dreamings and their doings there arose on the Pacific shore a structure that was more than lath and mortar; that was a symbol of New Mexico's awakening, to the meaning of her past, to the value of her present, to the promise of her future — a monument whose reflected light has illuminated the State; and which we have now brought home to her own soil transformed into enduring masonry, and endowed with perpetuity, that all her children may cherish and enjoy.

"And thus it comes to pass, as the outcome of these years of planning and of striving, that the result is now before us; and it may well be said by him who planned, and by everyone whose influence, whose encouragement, whose labor, or whose financial

aid, have helped to bring about this crowning achievement: 'If a monument you wish, look about you.'

"Every man and woman who has had anything to do with the Museum of New Mexico, old or new, whether as to its establishment, its construction, its description, or the scientific and artistic activities connected with it, if they speak with candor and honesty, will say that the basic idea, and the inspiration and dynamic force to carry it out, came from a single brain.

"Therefore, I say, in order that the truth may be known of all men, that whatever others may have done, be it much or little, toward the creation of the epoch-making edifice in which we now stand, there is one man, without whose initiative and inspiring force it would not be here to-day. His name is Edgar L. Hewett.

"The work of the builders is done. But the task of those who are to use what they have builded, and by its use to justify the public munificence and private liberality which have made it possible, has only just begun."

## NEW DISCOVERIES IN ZUNI-LAND

### A Pueblo a Thousand Years Old

During the months of May, June, July and August, 1917, Dr. F. W. Hodge, of the Bureau of American Ethnology, and his associates, made rich archaeological discoveries at a point about fifteen miles southwest of Zuni, N. M. He was accompanied by Mr. Alanson Skinner of the American Museum of Natural History and Mr. E. F. Coffin, a surveyor. The site excavated is believed to be that of the aboriginal city of Hawikuh, one of the mythical "seven cities of Cibola" in quest of which Coronado explored this region in 1540. The Spaniard drove the Zunis out of Hawikuh, but the Indians returned, and a century later were thriving there. In 1670 the Apaches drove them out again and they never returned to occupy their pueblos. Franciscan missionaries subsequently established a mission there, but it eventually fell into ruins, and at the present time there is nothing but a mound to indicate its site.

It was in this vicinity that Dr. Hodge made his excavations. After the excavation had been carried to a depth of fifteen feet, he discovered the remains of an earlier pueblo, occupied probably 1,000 years ago, and even before Hawikuh was built.

By digging far enough into the debris the burial grounds of the ancient Zuni Indians at three different levels were reached. The

bodies, in conformance with some custom, were apparently dismembered, the heads and limbs being buried in one spot and the trunks in another. Another class of burials was discovered, apparently of another period, when the remains were cremated in bowls, and vessels containing water and food were deposited with the dead. At still another level Dr. Hodge discovered a class of burials, where the head of the dead person was always turned to the east. In these graves were also found vessels that had undoubtedly contained food. According to Dr. Hodge, the throwing of moist food into these graves caused the bones of the dead to decay, but helped, on the other hand, to preserve their clothing, so that even after hundreds of years the cloth, which was usually of closely woven cotton, could be identified.

In these excavations Dr. Hodge also found many ornamental objects inlaid with turquoise, pieces of porcelain, combs, and utensils, tending to throw some light upon the life of the Zunis of that particular period, and the influence of the Spaniards upon their civilization.

## BETATAKIN CLIFF DWELLING, ARIZONA

### Interesting Restoration in Navaho National Monument

Another fruitful archaeological expedition in 1917 was conducted by Mr. Neil M. Judd of the United States National Museum, for the purpose of restoring the Betatakin cliff dwelling in Arizona.

Betatakin, which, in the Navaho language, means Hillside House,— is located in a branch of Sagie canyon about eight miles west of Kayenta road. It is within the bounds of the Navaho National Monument, in the northern part of the Navaho Indian Reservation, and is one of the objects for the preservation of which the Navaho National Monument was created.

Betatakin is one of the most interesting cliff houses in northern Arizona. It consists of nearly a hundred rooms, built on the sharply sloping floor of a crescent shaped cave. In parts of the village the houses were originally two and even three stories in height. The walls are of stone, bound together with adobe mortar. The builders of Betatakin, like other primitive architects in the southwest, did not "break joints" in their masonry, and the

result was that their walls readily weakened and gradually collapsed when neglected. The roofs were constructed with cedar or pine beams, overlaid with layers of willows, cedar bark or grass and mud, in succession. In many cases the front walls were built of wattle construction instead of stone, that is, willows, placed upright, were bound to cross pieces embedded in the side walls and the whole was covered with mud.

About half of the rooms were found to be in a good state of preservation, with the roof still intact. The ceilings are usually from four and a half to five feet above the floor. These cramped quarters were occupied only for warmth and shelter. The inhabitants lived mostly out of doors, grinding corn, cooking and performing other domestic operations in the numerous open courts found among the dwellings proper. Besides the ordinary dwelling rooms and these open courts of Betatakin, there are storage rooms and ceremonial rooms, or kivas, these latter being rectangular. Mr. Judd's plan of work was not to rebuild Betatakin, but to restore the house sufficiently to suggest the original structure, and as far as possible he used the original stones in replacing the fallen walls. After careful examination of the aboriginal mortar and some experimentation, the best results were obtained by using a half and half mixture of sand and red clay obtained along the sides of the canyon and carried to the ruins on the backs of Indians. Everything possible was done to preserve the characteristic appearance of a cliff dwelling, though it was necessary in a few places to put iron braces in the outer walls to prevent their falling. The shallow steps cut by the ancient cliff dwellers in the rock leading down to the canyon below and running to various difficult places in the cave itself were deepened and enlarged to form a ready passage for present day visitors. Where necessary, ladders constructed of cedar poles, with cross pieces bound with willows, were put in place. These are replicas of ladders frequently found in northern Arizona cliff houses, and were used only to make the cliff dwelling more accessible to visitors, without detracting from the " atmosphere " of the ruin. Trunks of trees, with the branches as steps, were also placed as ladders.

There is no way yet to estimate the age of Betatakin.

Besides several interesting smaller ruins in the Navaho National Monument, there are two other large cliff villages, Keet Seel

(Broken Pottery House) and Inscription House, the latter containing an inscription carved in the wall by a Spanish explorer in the late seventeenth century, or about a hundred years before Father Escalante made his famous trip from Santa Fé to Utah Lake and back to the Hopi villages. Father Escalante left a detailed journal of his trip, which is important in the study of the age and relationship of the cliff dwellings of this region.

## "AZTEC RUIN," NEW MEXICO, EXPLORED

The largest single piece of scientific excavation ever undertaken in the United States, according to "Science" of March 29, 1918, is that which the American Museum of Natural History began in the summer of 1916 and which is popularly but inaccurately called the "Aztec Ruin," located in the Animas valley, in northwestern New Mexico, a few miles below the Colorado boundary. It is one of the finest and best preserved examples of prehistoric pueblo architecture in the southwest. It is called "Aztec Ruin" because it is located directly across the Animas river opposite the town of Aztec.

The ruin is on the property of Mr. H. D. Abrams of Aztec. The American Museum of Natural History has secured a concession to clear out and study the entire ruin, and the funds for the work have been supplied by Messrs. Archer M. Huntington and J. P. Morgan of New York City.

The pueblo, in its prime, was typical of its period, consisting of buildings facing inward on three sides of a great quadrangular court, while the fourth side was protected by a low wall through which there was only one entrance. This structure was a great communal dwelling, constituting a veritable village in itself. The buildings on three sides presented a sheer wall rising three stories high on the outside, but were terraced on the inside, the entrance to the second story being over the roof of the first, and the entrance to the third being over the roof of the second. Interior stairways were not in use, access being gained to upper levels by movable ladders. As a military contrivance, this plan could hardly have been improved upon, since an enemy would be forced to make not one, but a series of attacks, to get possession of the building.

Although the work of investigation has as yet been only partially completed, the features of the ruin itself, and the surprising finds

which have been made within the crumbling walls, have proved of sufficient importance to surpass the most sanguine expectations of the investigators. Necklaces of shell and turquoise, agate knives, pottery vessels of varied form and ornamentation, cotton cloth and woven sandals are among the gems of prehistoric pueblo art which have recently been unpacked in the laboratories of the American Museum of Natural History in New York City. The work has been supervised by Assistant Curator N. C. Nelson, under the immediate direction of Mr. Earl H. Morris, also of the Museum.

The seventy thousand specimens already recovered from the Aztec Ruin constitute one of the most complete collections representative of a prehistoric North American culture which have thus far been obtained. Trained experts are working with the material, and in the near future a representative selection will be placed on exhibit in the Museum's Southwest Hall.

One of the most important phases of the explorations at Aztec is the repair and preservation of the ruin. As fast as the walls are uncovered, masons replace the stones which have disintegrated and strengthen the portions of the structure which threaten to collapse. The intention is to make of the ruin a permanent monument to the aborigines of the southwest rivalling in importance the Mesa Verde National Park.

## NATIONAL PARKS AND MONUMENTS

### Complete List

Following is a complete list of the National Parks and National Monuments, together with the dates of their creation, their locations and their areas. Those marked with an asterisk (*) are administered by the Department of the Interior; those marked by a dagger (†) are administered by the Department of Agriculture, and those marked by a double dagger (‡) are maintained by the Department of War. The dates given are the earliest dates of establishment although with some there has been a later change of boundary or status.

*National Parks*

| Name | Location | Created | Acres |
|---|---|---|---|
| * Casa Grande | Arizona | 1892 | 480 |
| * Crater Lake | Oregon | 1902 | 159,360 |
| * General Grant | California | 1890 | 2,536 |
| * Glacier | Montana | 1910 | 981,681 |
| * Hot Springs | Arkansas | 1832 | 912 |
| * Hawaii | Hawaiian Islands | 1916 | 75,295 |
| * Lassen Volcanic | California | 1907 | 79,561 |
| * Mesa Verde | Colorado | 1906 | 48,966 |
| * Mount McKinley | Alaska | 1917 | 1,408,000 |
| * Mount Rainier | Washington | 1899 | 207,360 |
| * Platt | Oklahoma | 1902 | 848 |
| * Rocky Mountain | Colorado | 1915 | 254,327 |
| * Sequoia | California | 1890 | 161,597 |
| * Sully's Hill | North Dakota | 1904 | 780 |
| * Wind Cave | South Dakota | 1903 | 10,522 |
| * Yellowstone | Wyoming, Idaho, Montana | 1872 | 2,142,720 |
| * Yosemite | California | 1890 | 719,622 |
| | | | 6,254,567 |

*National Monuments*

| Name | Location | Created | Acres |
|---|---|---|---|
| † Bandelier | New Mexico | 1916 | 22,075 |
| ‡ Big Hole Battlefield | Montana | 1910 | 5 |
| ‡ Cabrillo | California | 1913 | 1 |
| * Capulin Mountain | New Mexico | 1916 | 681 |
| * Chaco Canyon | New Mexico | 1907 | 20,629 |
| * Colorado | Colorado | 1911 | 13,883 |
| † Devil's Postpile | California | 1911 | 800 |
| * Devil's Tower | Wyoming | 1906 | 1,152 |
| * Dinosaur | Utah | 1915 | 80 |
| * El Morro | New Mexico | 1906 | 160 |
| † Gila Cliff Dwellings | New Mexico | 1907 | 160 |
| * Gran Quivira | New Mexico | 1909 | 240 |
| † Grand Canyon | Arizona | 1908 | 806,400 |
| † Jewel Cave | South Dakota | 1908 | 1,280 |
| * Lewis & Clark Cavern | Montana | 1908 | 160 |
| * Montezuma Castle | Arizona | 1906 | 160 |
| † Mount Olympus | Washington | 1909 | 299,370 |
| * Muir Woods | California | 1908 | 295 |
| * Mukunteweap | Utah | 1909 | 15,840 |
| * Natural Bridges | Utah | 1908 | 2,740 |
| * Navajo | Arizona | 1909 | 360 |
| † Old Kasaan | Alaska | 1916 | 39 |
| † Oregon Caves | Oregon | 1909 | 480 |
| * Papago Saguaro | Arizona | 1914 | 2,050 |

*National Monuments* — continued

| Name | Location | Created | Acres |
|---|---|---|---|
| * Petrified Forest | Arizona | 1906 | 25,625 |
| * Pinnacles | California | 1908 | 2,080 |
| * Rainbow Bridge | Utah | 1910 | 160 |
| * Shoshone Cavern | Wyoming | 1909 | 210 |
| * Sitka | Alaska | 1910 | 57 |
| * Sieur de Monte | Maine | 1916 | 5,000 |
| † Tonto | Arizona | 1907 | 640 |
| * Tumacacori | Arizona | 1908 | 10 |
| * Verendrye | North Dakota | 1917 | 253 |
| † Walnut Canyon | Arizona | 1915 | 960 |
| † Wheeler | Colorado | 1908 | 300 |
| | | | 1,224,335 |

The foregoing list contains the following changes since our last Annual Report:

By a clerical error, the area of the General Grant National Park was wrongly stated in our last Annual Report. The foregoing figure, 2,536 acres, is correct.

The area of Rocky Mountain National Park was increased by act approved February 14, 1917 (39 Stats. 916), and now embraces 254,327 acres as above stated.

Bandelier National Monument is found to contain 22,075 acres.

By proclamation of June 18, 1917, the boundaries of El Morro National Monument were changed so as to embrace 240 acres.

Verendrye National Monument, embracing 253 acres in North Dakota, is added to the list.

## VERENDRYE NATIONAL MONUMENT CREATED

The proclamation for Verendrye National Monument in North Dakota was signed by the President on June 29, 1917.

This monument reserves for public use and enjoyment a commanding butte locally called Crowhigh Mountain, which stands close up to the left bank of the Missouri river in northwestern North Dakota. This butte is important historically because it was used by Verendrye, the French explorer of the Northwest, and his party, who started from the north shore of Lake Superior, passing westward into the unknown regions of the Great Plains and Rocky Mountains about 1740. Verendrye was the first known

white man who entered the territory now included within the State of North Dakota. The butte was used as an observation station by this explorer, who crossed the Missouri river at this point, going thence westward as far as the Rocky Mountains.

The President's proclamation creating this National Monument reads as follows:

*By the President of the United States of America*

A PROCLAMATION

Whereas, a high and imposing butte, locally known as Crowhigh Mountain, located in township 192 north, range 93 west, of the fifth principal meridian, North Dakota, was discovered and utilized between 1738 and 1742 by Verendrye, an explorer of New France and the first white man known to have entered upon the territory now embraced within the present State of North Dakota, as an observation station from which to spy out the farther and unknown West; and

Whereas this lofty natural summit, both because of its usefulness as stated and because it marks the spot where the Verendrye party first crossed the Missouri River in their journey to the Rocky Mountains, thus giving the place great historic interest, and it appears that the public interests will be promoted by reserving the lands upon which Crowhigh Mountain is located as a National Monument:

Now, therefore, I, Woodrow Wilson, President of the United States of America, by virtue of the power and authority in me vested by section two of the act of Congress entitled, "An act for the preservation of American antiquities," approved June 8, 1906 (34 Stat. 225), do proclaim that there are hereby reserved from all forms of appropriation under the Public Lands Laws and set apart as the Verendrye National Monument, all the tracts of land in the State of North Dakota shown upon the diagram hereto attached and made a part hereof, and more particularly described as follows, to wit, the southeast quarter of the southwest quarter, and lots four and five, in section fourteen, township one hundred and fifty-two north, range ninety-three west, of the fifth principal meridian.

Warning is hereby given to all unauthorized persons not to appropriate or injure any natural feature of this monument or to occupy, exploit, settle, or locate upon any of the lands reserved by this proclamation.

In witness whereof I have hereunto set my hand and caused the seal of the United States to be affixed.

Done at the city of Washington this 29th day of June, in the year of our Lord one thousand nine hundred and seventeen and of the independence of the United States the one hundred and forty-first.

[SEAL] WOODROW WILSON.

By the President:

ROBERT LANSING,
*Secretary of State.*

## NATIONAL PARK SERVICE

During the past year the new National Park Service of the Department of the Interior, created by act approved August 25, 1916 (see our last Annual Report, page 374), has been organized and has taken up actively its new function under the management of the following officers:

Director, Hon. Stephen T. Mather of Illinois.
Assistant Director, Hon. Horace M. Albright of California.
Chief Clerk, Mr. Frank W. Griffith of New York.

It is the ninth bureau of the Interior Department. Quarters in the new building of the Interior Department were assigned to the service, and it now occupies the south section of the fourth floor, east wing. The temporary organization of the former field establishment under the direction of the Superintendent of National Parks, authorized by Congress under date of February 28, 1916, to be located in Washington, has been absorbed by the new organization, and the office of Superintendent of National Parks has been abolished. The last incumbent of this office, Mr. R. B. Marshall, had resigned on December 31, 1916, to resume his duties as chief geographer of the United States Geological Survey.

The first report of the Director of the National Park Service to the Secretary of the Interior, dated October 13, 1917, and covering the year ended June 30, 1917, is a document of 258 pages, abounding in interesting information about National Parks and National Monuments.

## VISITORS TO NATIONAL PARKS

Bearing in mind the distinction between National Parks and National Monuments, following is a statement of the number of

visitors to the National Parks only during the year ended June 30, 1917:

| | | | |
|---|---|---|---|
| Casa Grande | 2,437 | Platt | 35,000 |
| Crater Lake | 11,645 | Rocky Mountain | 117,186 |
| General Grant | 17,390 | Sequoia | 18,510 |
| Glacier | 15,050 | Sully's Hill | 2,207 |
| Hot Springs | 135,000 | Wind Cave | 16,742 |
| Hawaii | No record | Yellowstone | 35,400 |
| Lassen Volcanic | 880 | Yosemite | 34,510 |
| Mesa Verde | 2,223 | | |
| Mount McKinley | None | Total | 479,748 |
| Mount Rainier | 35,568 | | |

The National Monuments, being largely reservations made on account of rare scientific interest or some particular natural feature, and generally less accessible than the National Parks, do not record large numbers of visitors as a usual thing. The Grand Canyon National Monument was one of the most popular and had many thousands of visitors, probably about 120,000, but we have not the exact figures. The Sieur de Monts Monument, in Maine, enjoyed a very large patronage, approximately 53,750 people having entered the reservation prior to October 12, 1917. Muir Woods Monument, in California, was visited by approximately 26,000 people during the season. The general increase in national-park patronage during the past few years does not represent merely an increase in local travel; that is, travel from various park States and immediately adjacent territory. It represents an increase in both local travel and in patronage of tourists from distant States and foreign countries. The increase in 1917 would probably have been larger if it had not been for the unauthorized circulation of persistent reports that the Government regarded it inadvisable for the people of this country to travel for pleasure during the war because such unnecessary movements would congest trains and interrupt traffic; that railroads would not quote excursion rates during the 1917 season; and that some or all of the National Parks would be closed. The unusual delay in issuing the announcement of the excursion rates for the summer, especially by the eastern railroads, served to give a degree of authenticity to these reports that seriously disturbed the organized party business for the season. Furthermore, there was some apprehension regarding the effect that the pending war tax bill would have upon the

national park transportation rates. This was probably due to a general understanding that transportation tickets of all kinds would be taxed. The war tax bill never at any time carried a provision for taxing excursion or other tickets covering service in the national parks. Nevertheless, these rumors, uncertainties and delays influenced summer plans. Recognizing the disturbing nature of these forces, the Secretary of the Interior authorized on May 2, 1917, the issuance of a general statement that had the effect of clarifying the situation. The statement contained the following paragraphs:

"When asked to-day whether the national parks are to be closed to visitors during the season of 1917, Secretary Lane stated that the persistent rumors which have been current for the past few days, particularly in the Middle West, that such action was to be taken by the Interior Department, have absolutely no foundation in fact. All of the parks are to be opened at the usual time.

"The Secretary believes that the entrance of the United States into the war will not materially affect western tourist travel, and expressed the conviction that the national parks will be quite as well patronized this year as they have been during each of the past two years, when upward of 400,000 people visited them. He pointed out that it is even more important now than in times of peace that the health and vitality of the Nation's citizenship be conserved, that rest and recreation must materially assist in this conservation of human tissue and energy, and that the mountainous regions of the national parks offer opportunities in abundance for thoroughly enjoying a vacation of long or short duration."

There is also no doubt but that the draft of the army, the necessity for private economy, and the generally upset condition of family affairs throughout the country seriously interfered with the number of visitors.

Notwithstanding these adverse conditions, the number of visitors was more than 100,000 greater than in 1916. (See page 373 of our last Annual Report.)

## GRAND CANYON NATIONAL PARK PROPOSED

On April 4, 1917, Hon. Henry F. Ashurst of Arizona introduced in the United States Senate a bill (S. 390) "to establish the Grand Canyon National Park in the State of Arizona." Similar bills were introduced in the previous Congress (S. 8250 and H. R. 20447) but they failed to pass.

The Grand Canyon National Monument already exists and embraces 806,400 acres, but as a National Monument its existence is due to Presidential proclamation, and can be set aside by statute. The bill to establish a National Park by statute will give it a different standing. The area proposed to be set aside by the new act is somewhat less than that of the National Monument, and embraces only about 996 square miles or 637,440 acres. It constitutes a part of the Kaibab and Tusayan National Forests, in northern Arizona. A large part of it also lies within the Grand Canyon Game Refuge, and the Grand Canyon National Monument covers practically the entire area, thus constituting a third and paramount reservation of these lands. Secretary Lane, in advocating the establishment of the National Park, points out that in the very nature of things the Grand Canyon cannot, as a section of two national forests, a game refuge, or a national monument, be properly developed for the public benefit, and it cannot be effectively administered or adequately protected. While the south rim of the canyon has, to a small extent, been made available to the traveling public, and many thousands of tourists have thus had the opportunity of visiting certain of its scenic features, private enterprise alone, operating under extraordinary difficulties, has accomplished this development. The Secretary is informed that 106,000 tourists visited the south rim of the Grand Canyon during the calendar year 1915, but, due to lack of roads, trails, side-trip destinations, etc., this vast throng found little opportunity to obtain a full measure of enjoyment of the marvelous grandeur of this region. He points out that the Grand Canyon is the most stupendous natural phenomenon in the world, the finest example of the power and eccentricity of water erosion, and as a spectacle of sublimity without peer. He is of the opinion, therefore, that it is entitled to the same status and to an equal degree of consideration by Congress as are enjoyed by Yellowstone, Yosemite, and the other great national parks which contain natural phenomena of the first order.

The Colorado River, which flows through the gorge, drains a territory of 300,000 square miles, and it is 2,000 miles from the source of its principal tributary to its entrance into the Gulf of California. It is one of America's greatest rivers. It is proposed by the bill to establish a national park at the point in the river's

course where it has worn a channel more than a mile deep. This enormous gulf measures occasionally 20 miles across the top.

The sides of the gorge are wonderfully shelved and terraced, and countless spires rise within the enormous chasm, sometimes almost to the rim's level. The walls and cliffs are carved into a million graceful and fantastic shapes, and the many colored strata of the rocks through which the river has shaped its course have made the canyon a lure for the foremost painters of American landscape.

## NATIONAL PARK PROJECTS AND STUDIES

Other projects which have the approval of the Secretary of the Interior are for the creation of the National Park of the Cliff Cities in New Mexico and the Mount Baker National Park in Washington.

From the report of the Director of the National Park Service we also learn that in compliance with the resolution of the United States Senate, dated September 7, 1918, Director Mather has made a study of the proposed Sand Dunes National Park in Lake, Porter and Laporte Counties, Ind. A hearing on the project was held in Chicago on October 30, 1916, and the dune areas themselves were inspected early in November. Mr. Mather's complete report on the project was recently published. The Senate resolution required a report as to "the advisability of securing, by purchase or otherwise, all that portion of the counties of Lake, Laporte, and Porter, in the State of Indiana, bordering upon Lake Michigan, and commonly known as the 'Sand dunes,' with a view that such lands be created a national park." The department was also requested to furnish information as to the cost of acquiring the dunes and the probable cost of maintaining the area as a national park. Director Mather in his report states that the sand dunes of Lake and Laporte Counties are unimportant and not valuable for park purposes, but he states that the Porter County dunes possess national-park quality. The Director recommends that the park in this county should include from 15 to 20 miles of the Lake Michigan beach. In order to secure all of the scenic sand dunes in this vicinity the park should be approximately a mile wide. It is estimated that it would cost between $1,800,000 and $2,600,000 to

purchase the sand-dunes land. As Congress has never purchased lands for the purpose of establishing national parks, no recommendation was made as to the advisability of establishing the Sand Dunes Park. Full data regarding the physical characteristics of the sand dunes have been submitted to Congress in compliance with the Senate resolution.

Investigation was also made in the winter of 1916–17 of the proposed Mississippi Valley National Park. This park project contemplates the purchase of lands near McGregor, Iowa, on the shore of the Mississippi River, and certain islands in the river. The investigation disclosed the fact that a national park of dignified proportions in this region should include land on both sides of the Mississippi River and the islands therein, between McGregor and Prairie du Chien, Wis. Part of the lands that might be included in a national park are now part of a Wisconsin State park. No estimate has been made of the cost of obtaining these lands. It is understood that areas of considerable size in the proposed park would be donated in the event that Congress should favorably consider the establishment of a national park.

A study of certain phases of the Mount Evans or Denver National Park project in the Rocky Mountains, a considerable distance west of Denver, was recently made. This study supplements the investigation made by officers of the General Land Office more than a year ago. Further consideration will be given to this project during the ensuing year. Considerable data relating to the proposed park have been transmitted to Congress.

## GREATER SEQUOIA PARK PROPOSED

Considerable attention was attracted in 1917 to a project to add to Sequoia National Park the Kings River country, the Great Western Divide, the Kern Canyon, and about 70 miles of the crest of the Sierra Nevada, including Mount Whitney, the highest mountain in the United States, exclusive of Alaska. The idea is embodied in Senator Phelan's bill (S. 2021) entitled "A bill to add certain lands to the Sequoia National Park."

The Director of the National Park Service says that the mountainous area to be added is valuable for no purposes but those of a national park. There is practically no merchantable timber on

the lands, and most of what is classed as merchantable is giant Sequoia timber that should be preserved for park purposes and not sold to lumber interests. There are relatively small grazing areas in this region, and some of the grazing land should be set aside for pasturage of tourist stock. Ultimately, it may all be needed for the visitors.

By far the largest portion of the whole territory involved in the extension plan is a wild, mountainous region of extraordinary grandeur, a tumbled sea of mountainous peaks from 12,000 to over 14,000 feet in altitude, with Mount Whitney as the climax of the whole; with hundreds of lakes, clear as crystal, beautiful beyond description, and many of them well stocked with trout; with great deep gorges that compare favorably with the famous Yosemite Valley, that were carved by the ice in the same manner as the Yosemite was chiseled from the solid granite; with raging rivers, great waterfalls and even glaciers; a region that is national park in character in every way.

The report of the Secretary of the Interior for 1915 says of this subject:

"Congress so carefully cut the boundaries of the national parks to the express purpose for which each was created that, in some instances, scenic features of the very first order were excluded. In the careful study which the department has since made of each such territory it has become apparent that, in several instances outlying territory should be added to these reservations. The most distinguished of these instances is Sequoia National Park, the boundaries of which should be extended to include the superb Kings Canyon on the north and on the east the Kern Canyon and the west slope and summit of Mount Whitney."

## GREATER YELLOWSTONE PARK PROPOSED

Another proposition for enlarging an existing National Park is that for adding to Yellowstone National Park the Teton Mountains which lie just south of the southern boundary. This suggestion has the approval of the National Park Service. These mountains begin at the foot of the Pitchstone plateau a mile or two below the southern gateway and extend south and west. They border Jackson Lake on its west side, rising rapidly in a series of remarkably toothed and jagged peaks until they reach a sublime climax, 30

miles south of the park, in the Grand Teton, which rises to an altitude of 13,747 feet.

This whole outcropping of gigantic granite peaks is in many respects the most imposing massing of mountain spires in America. It rises more than 7,000 feet, apparently perpendicular from the lake and plain. Seen from the road at Moran, where the Snake River escapes from the reclamation dam which pens flood waters within Jackson Lake for the benefit of farms in arid western lands, these mountains seem actually to border the lake's west shore; yet they are nine miles away from the observer.

Jackson Hole, as this country has been known for many years, was the last refuge of the desperado of the picturesque era of our western life. Here until comparatively recent years the bank robber of the city, the highwayman of the plains, the "bad man" of the frontier, the hostile Indian, and the hunted murderer found safe retreat. In these rolling, partly wooded plains, and in the foothills and gorges of these mountains, even military pursuers were baffled. Here for years they lived in safety on the enormous elk herds of the neighborhood, and raided distant countryside at leisure.

With their passing and the partial protection of the game, Jackson's Hole entered upon its function of contributing to the pleasure of the people generally.

It is felt by the advocates of the addition that these mountains are, from their nature, a component part of the Yellowstone National Park whose range of scenery they complete, and no doubt would have been included in 1872 within the original boundaries had their magnificence then been known and appreciated. Already visitors to Yellowstone Park go in automobile stages to Moran and back on regular schedules.

## YELLOWSTONE PARK GEOLOGIST DEAD

The death of Dr. Arnold Hague at the age of 77 years in the city of Washington, D. C., on May 14, 1917, removes a scientist of high repute, who made geological studies of the Yellowstone National Park which are standards in the scientific literature of the United States. He had been a member of the United States Geological survey for 38 years.

Dr. Hague was born in Boston December 3, 1840, the son of an eminent clergyman, Dr. William Hague, and was graduated from Sheffield Scientific School, Yale University, in 1863.

Upon his graduation he went to Germany where he studied at the University of Gottingen, Heidelberg, and the Fribourg School of Mines. In 1866 he returned to the United States and was appointed Assistant Geologist of the United States Geological exploration of the fortieth parallel under Clarence King. The winter of 1867–68 he spent in California and at Virginia City, Nev., in a study of the geology of the Comstock Lode and the "Washoe process" of securing gold from the ore, about which he wrote a chapter in the report of the King exploration and another on the geology of the White Pine mining district. With Samuel F. Emmons he wrote a report of the detailed survey across the Cordilleras of North America from the Great Plains to the Sierra Nevadas.

Later Dr. Hague, after his completion of the work in this country, was appointed Government geologist of Guatemala, and made many trips over that country, especially in the mining and volcanic districts. The Chinese government secured his services to examine the gold, silver and lead mines of Northern China. Upon the organization of the United States Geological Survey, which took place shortly after his return home, in 1879, he became one of its geologists. His first investigation was in Nevada in the Eureka mining district.

Dr. Hague was best known, however, for his work at the National Park in the Yellowstone district, where in 1883 he was assigned particularly to the geysers, in connection with the extinct volcanic regions of the Rocky Mountains. His work on that subject and others upon the geology of the Yellowstone, and an atlas of the park, are standard.

In the reports of the Survey for a number of years, Mr. Hague made many valuable suggestions as to the uses and improvements of the park, with a reference too to the flora and fauna of the place.

He received his degree of Sc. D. from Columbia University in 1901 and Aberdeen University gave him the degree of LL.D. He was a member of many learned societies and served on many public commissions.

## GLACIER NATIONAL PARK PASSES

There are several passes of some celebrity connecting the east and west sides of Glacier National Park across the Continental Divide, says a press bulletin of the National Park Service. All of them pass through scenery of much splendor. All of them command views on both sides which are among the great views of America. Three of these passes are in actual use, and trails will be built across others when the public demand warrants.

The most celebrated of the passes in actual use is Gunsight Pass. From the east it is reached directly from St. Mary Lake, and, by way of Piegan Pass, from Lake McDermott. From the west it is reached from Lake McDonald, the trail passing the celebrated Sperry Glacier. The pass is a U-shaped notch in the Divide hanging like a child's swing between Gunsight Mountain and Mount Jackson. Just west of it lies Lake Ellen Wilson, one of Glacier's greatest celebrities for beauty. Just east of it lies Gunsight Lake, one of Glacier's greatest celebrities for wildness. At the foot of Gunsight Lake an easy trail of two miles leads to the Blackfeet Glacier, the largest in the park, the west lobe of which is readily reached and presents, within less than a mile of ice, an admirable study of practically all the phenomena of living glaciers.

Swiftcurrent Pass crosses the Continental Divide from Lake McDermott on the east; on the west side, one trail leads north to the Waterton Lakes and Canada, another south to Lake McDonald. Four beautiful shelf glaciers may be seen from the east side of this pass, and from the crest of the pass, looking back east, a magnificent view is had of the lake-studded Swiftcurrent Valley.

Granite Park Chalet, which stands on a lofty shelf just west of the pass, is the principal objective for the thousands who travel this trail from Lake McDermott. It commands a gorgeous view of the great central valley, bordered with monster mountains, which leads north into Canada. From the chalet a horse trail now building will soon cross the Divide back again through Logan Pass. A foot trail leads from the chalet to the top of the Garden Wall directly overlooking the Swiftcurrent and Grinnell Glaciers. Another foot trail, involving an hour's steady climb, leads to the summit of Swiftcurrent Mountain, from which one looks upon a

complete circle of supreme view, including all of Glacier National Park, and generous glimpses of the Canadian Mountains on the north, the great plains on the east, and the Rocky Mountains on the south and west.

Brown Pass, the trail over which has been little improved since the old game days because so few persons use it, is destined to become one of the most celebrated passes in America. From the east side the trail leads from Waterton Lake up Olson Valley, amid scenery as sensational as it is unusual, skirting lakes of individuality and unusual beauty even for Glacier National Park, and enters, at the Pass, the amazingly wild and beautiful cirques at the head of Bowman Lake. Here is disclosed some of the wildest scenery in the world. From the top of the pass, one trail drops down to Bowman Lake, which it follows to its outlet and thence to a junction with the Flathead River road, over which the traveler reaches Lake McDonald.

A second trail is planned to be built this summer to connect Brown Pass, across sensational summits, with the wonderful cirques at the head of Kintla Valley.

## MESA VERDE NATIONAL PARK WONDERS

The Mesa Verde National Park of 48,966 acres in southwestern Colorado, containing the most notable and best preserved prehistoric cliff dwellings in the United States, if not in the world, takes on new interest in the light of the latest discoveries of Dr. J. Walter Fewkes of the Smithsonian Institution, who has begun, for the Department of the Interior, the exploration of the mounds of Mummy Lake. Far View House, whose excavation is well advanced, opens up a new phase in the history of this famous prehistoric people. The National Park Service explains the importance of the historical vista opened by the discovery of Far View House as follows:

It must be recalled that, previous to the discovery of Sun Temple in the summer of 1915, the Mesa Verde ruins apparently were confined to cliff dwellings.

Sun Temple, however, had been found under a mound on the top of the mesa and indicated phases of Mancos civilization hitherto unknown. That it represented a later development than

Cliff Palace, Spruce Tree house and the other celebrated cliff dwellings was suggested by its more advanced ideas in the arts of the building and wall decoration. That it probably represented the highest and latest phases of Mancos civilization seemed to be shown by the fact that this supreme building, the temple to the sun, God of the Mancos, remained unfinished, even unroofed. The fact gave some color to the theory that it marked the close of the community life of this people.

That was the situation when Dr. Fewkes began in the summer of 1916 the excavation of the mounds found in the so-called Mummy Lake section of the Mesa Verde. These mounds also lie on the surface. They are upon Chapin Mesa, four or five miles north of the splendid groups of cliff dwellings which nestle in the cliffs overlooking Spruce and Cliff Canyons. The Government road from Mancos to Spruce Tree House passes it.

What is known as Mummy Lake was never properly a lake, but a reservoir for prehistoric irrigation. The surrounding region was doubtless well farmed. The remains of the ancient ditches indicate a considerable activity. It was one of the pueblos in this farming neighborhood which Dr. Fewkes has uncovered and named Far View House because of the extensive view it affords of the neighboring country. It was not the only farm country of the Mesa Verde. Four or more areas similarly cleared of prehistoric cedar forests and possessing mounds exist in the National Park. It will be seen that civilization that led up to and possibly ended in Sun Temple is much more extensive than was once supposed.

The Mummy Lake clearing, now dotted with sage brush, is extremely fertile; under irrigation it doubtless yielded large crops. The region will be found to-day a veritable summer flower garden. Indian paint brush and asters color it vividly.

Far View House, as it gradually emerged from the sandy mound that thickly covered it, proved to be a large pueblo containing forty secular rooms and four circular ceremonial kivas. It is a two-storied building. The rafters of the first story still exist. There are indications of a third story; the pueblo may have contained fifty rooms.

The central kiva is of unusually large size, indicating that the building may have housed more than one clan. Its position, like

that of the Sun Temple, seems to have been carefully determined by astronomical observation. Its south wall is in line with the rising sun at the autumnal equinox. The main north wall is one hundred and thirty feet long.

There are many indications in addition to propinquity that this pueblo, and probably the many which remain unearthed, were built by the peoples that built the great cliff dwellings of the Mesa Verde, and, later on, the Sun Temple. The decorations of some of the stones differ from those on the inner walls of Sun Temple, and may represent a considerably earlier era. The serpent spiral there used is also found in Spruce Tree House. The complicated form of several incised figures suggest something more than mere embellishment, but Dr. Fewkes fears that it is too much to hope that they may have value as inscriptions.

One of the doorways into the large central kiva recalls a Maya arch and is unique in Mesa Verde construction. It consists of a flat stone forming the top and resting on side piles of other stones, each set a little back from the one above it. There are no true arches in the Mesa Verde.

Far View House, so far as excavated, throws no new light on the age of the Mesa Verde civilization, or on the mystery of this people's disappearance. But it constitutes a valuable addition to the knowledge of their strange civilization, and it may point the way, through further excavation, to valuable, even important, revelations.

## ORIGIN OF CRATER LAKE PARK

The story of the origin of Crater Lake National Park in southern Oregon was told at a National Parks Conference in Washington, D. C., about a year ago, by Judge Will G. Steel of Oregon, as follows:

" Forty-six years ago I was a farmer's boy in southern Kansas and attended school five miles distant. My lunch was carried in a newspaper. One warm day in May or June I sat in the schoolroom eating the contents of that paper. When through I scanned the columns, reading the short articles, among which was a description of a sunken lake that had been discovered in Oregon. It was said to be 5,000 feet below the surface of the surrounding country, with vertical walls, so that no human body could reach the water. In its center was an island 1,500 feet high, with an extinct crater

in the top. In all my life I never read an article that took the intense hold on me that that one did and I then and there determined to go to Oregon and to visit that lake and to go down to the water.

" I had two brothers in Portland at the time. Two years thereafter I went to Oregon with my parents and we were met at the steamer landing by my brothers. Before getting over the dock I asked them where that sunken lake was, and found that they had never heard of it.

" It was seven years before I was able to find anyone who had ever heard of it. Then I was told there was something of that sort in southern Oregon, but my informer was not sure. Nine years later I found a man who had actually seen it, and gave me a good description of it, that greatly increased my desire to see it. However, I was not able to get there until the summer of 1885, when we made the trip in company with three friends, arriving there in July.

" Crater Lake was discovered by a party of twenty-two prospectors, led by John W. Hillman, then of Jacksonville, Oregon, June 12, 1853, and named Deep Blue Lake. Mr. Hillman was the last survivor of this party and died in Hope Villa, Louisiana, March 19, 1915, in the eighty-third year of his age.

" While standing on the rim of the lake in 1885 with Professor Joseph Le Conte, the thought occurred to me that no point around this wonderful cauldron had the hand of man yet desecrated with peanut stands or other marks of desolation, and that something should be done to save it forever for the people of this great country.

" How to accomplish this was the question, so I turned to the Professor for counsel. We discussed it at length and finally decided the only way was to have a national park created. Ways and means were discussed and the work of preparation commenced then and there. A petition to the President was prepared, asking for the withdrwal from the market of ten townships, which petition was granted the following January, when President Cleveland issued an executive order to that effect.

" The actual work of interesting Congress commenced immediately and continued for seventeen years, when a bill was passed and signed by the President May 22, 1902, the anniversary of the marriage of my parents."

## MOUNT McKINLEY NATIONAL PARK

Mount McKinley National Park, which was created by act of Congress in February, 1917, and which embraces 1,408,000 acres in the southern part of central Alaska, has the distinction of containing the highest mountain in North America, having an altitude of 20,300 feet. Mount McKinley also rises higher above the surrounding country than any other mountain in the world. The National Park Service, however, points out that there are several mountains in the Himalayas which materially exceed its height, one of which rises more than 25,000 feet above sea level; and yet Mount McKinley, to the observer, is loftier than any of these.

The reason is that the greatest Himalyas are seen from valleys seven to ten thousand feet in altitude, while Mount McKinley rises abruptly from valleys three thousand feet and even less in altitude. The visitor to the Mount McKinley National Park looks up more than seventeen thousand feet to the double peak, the upper fourteen thousand feet of which are covered with perpetual snow.

The reason is that the greatest Himalayas are seen from valleys which extends roughly east and west across southeast central Alaska, separating the vast northern inland from the more populated country whose shores are the Gulf of Alaska. The range parallels the Yukon many miles to the south.

The reservation contains 2,200 square miles. Its northern slopes, which overlook the Tanana watershed with its gold mining industry, are broad valleys inhabited by enormous herds of caribou. Its southern plateau is a perpetual winter wilderness through which glaciers of great length and enormous bulk flow into the valleys of the south. In this national park, which the railroad now being built by the Government into the Alaskan interior will open presently to the public, America possesses Alpine scenery upon a titanic scale.

From the south, Mount McKinley is wholly inaccessible. But from the plains of the north, valleys of easy grade lead one from another to its foot.

"It is an awe-inspiring region of massive mountains and ice-capped peaks," Belmore Browne of the Camp Fire Club testified before the Senate Committee on Territories. "The Piedmont Plateau that follows the range affords a beautiful roadway direct

to Mount McKinley, and when you reach the plateau all difficulties vanish and you see a view that is unique on this earth. You see the huge mountain line of perpetual snow, rising like a great wall on the southeast. You can ride a pony to where Mount McKinley rises seventeen thousand feet above you in a glittering wall of snow and ice. It is flanked by stupendous mountains which make a wonderful setting for the monster."

North of the vast mountain, however, is a rolling country dotted with beautiful lakes and forests and inhabited by enormous herds of caribou. In fact, the special reason why Congress set apart the region at this time was to conserve the wild animal life in advance of the invasion of hunters which the new Government railroad will bring into Alaska, the road as projected running within twenty miles of this greatest of nature's spectacles.

Charles Sheldon, of the Boone and Crocket Club, told the Senate Committee that several times he had counted as many as five hundred mountain sheep in a single day of ordinary travel, and that herds of caribou numbering from twelve to fifteen hundred are frequently seen.

As a game refuge and breeding ground, the new National Park conserves Alaskan game which elsewhere is rapidly disappearing. As in the case of the Yellowstone National Park, the reservation serves as a perpetual center of game supply for large neighboring areas.

These animals do not greatly fear man, because they have never been hunted. One can approach the great herds of caribou. There are also many Alaskan bear of great size.

## HAWAII NATIONAL PARK

The act of Congress, approved August 1, 1916, created the Hawaii National Park from lands on the islands of Hawaii and Maui, in the Territory of Hawaii. This reservation includes four tracts of land totaling 75,295 acres, within which are located two of the most famous active volcanoes in the world, Mauna Loa and Kilauea, and another volcano Haleakala, which erupted less than 200 years ago, in addition to the wonderful lava lake, a mass of fire 1,000 feet in diameter. The last report of the Director of National Park Service, from which the matter under this head is taken, says:

The Hawaiian volcanoes are wholly unique of their kind, the most famous in the world of science, and the most continuously, variously, and harmlessly active volcanoes on earth. Kilauea crater has been nearly continuously active with a lake or lakes of molten lava for a century. Mauna Loa is the largest active volcano and mountain mass in the world, with the eruptions about once a decade, and has poured out more lava during the last century than any other volcano. Haleakala is a mountain mass 10,000 feet high with a tremendous crater in its summit eight miles in diameter and 3,000 feet deep, with many high lava cones built up inside the crater. It is probably the largest of all known craters among volcanoes that are technically known as active.

In view of the provision in the act creating the park that no appropriations shall be made until conveyance is effected of such perpetual right of way over private lands within the exterior boundaries of the park as the Secretary of the Interior shall find necessary to make it reasonably accessible in all its parts, the matter of obtaining definite information as to conveyance of these rights of way has been taken up with the Governor of the Territory and with the Commissioner of Public Lands. Assurances have been obtained that needed rights of way will be granted within the Haleakala tract, and within the crater itself there will be no difficulty in obtaining camp and building sites, rights of way for trails, etc.

All of the private holdings within the Mauna Loa tract, so-called because it includes the very summit of the mountain Mauna Loa, with its crater Wokuaweoweo, will probably be conveyed to the Government within a short time. These lands will be donated by their owners.

A press bulletin of the National Park Service says that at the annual meeting of the Hawaiian Research Association held recently in Honolulu, President Lorrin A. Thurston told how public spirit opened the way from Kilauea to the summit crater of Mauna Loa. The distance was thirty miles by way of the scene of greatest volcanic activity, the northeast corner of the great crater. Private subscriptions in Hilo and Honolulu yielded three thousand dollars, which was enough for the rest house but not enough to build the trail. So, finally, a company of the 23rd Infantry volunteered its labor and constructed an effective horse

trail to Puu Ulaula, two-thirds of the way to the crater. It was at the end of this trail that the rest house was constructed. It contains cooking apparatus, beds and furniture for ten people, and stabling for a dozen horses. The most vital part of Mauna Loa from both the spectacular and research point of view is thus made accessible, and no doubt means will be found to complete the trail, the balance of which has been located and partly constructed.

## ANIMAL LIFE IN NATIONAL PARKS

The following important discussion of the subject of "Animal Life as an Asset of National Parks" was written by Messrs. Joseph Grinnell and Tracy L. Storer of the University of California as a contribution from the Museum of Vertebrate Zoology of that university to "Science," September 15, 1916:

The argument most frequently urged in favor of national parks is that they provide on a large scale for the protection of forest areas, and thereby ensure the transmission of a maximum water supply from the wooded tracts to the needy lands below. Attention has also been called to their value as refuges for wild life — particularly where the animals to be conserved are useful for game or food. The strict protection they afford enables the birds and mammals within their boundaries to reproduce at a maximum rate, and the surplus thus created, spreading outwards into adjacent unprotected areas, helps to make up for the depletion caused there by excessive hunting. The points mentioned above are fairly obvious. But national parks have other less generally recognized advantages, and among these we consider their potential uses as places for recreation and for the study of natural history, especially worthy of notice. We will here lay particular emphasis on their recreative value because this phase seems to have hitherto been treated only in a cursory way, and with an air of hesitancy, as if it were hardly deserving of practical consideration.

The term recreation is currently applied to any temporary change of occupation that calls vigorously into play latent or seldom used faculties of the mind and body. It is the purpose of this change to restore to the human organs the normal balance which special or artificial conditions of life disturb. As physiologists have long recognized, the interdependence of the various

bodily functions is such that the neglect of one is bound to have its effect on the others, and complete health can only be attained when every function is given its adequate share of exercise. In view of this fact and of the general character of urban life at present, it would seem that the type of recreation most urgently needed by the majority of people to-day is to be found in the open country. The relatively abrupt changes coincident with modern civilization have seriously interfered with the fine adjustments acquired by the human body in the course of long ages; and the modern business man, who may be regarded as the final and typical product of these changes, can now obtain rest in its fullest sense only by resorting for several weeks in the year to the open country or mountains. There he may find entire relief from the nerve-racking drive of city life, and be brought once more into contact with primitive conditions. There he may have an opportunity of reawakening his dormant faculties and of "resetting" his physical "tone," by effecting a readjustment of physiological inter-relations. One of the greatest needs of city dwelling people is to develop objective interests; "to get out of themselves," as the phrase goes; and a frequently effectual means to this end is a keen interest in outdoor things, encouraging, as it must, a healthy manner of living, as unconfined habit of observation, and a mood unaffected by the nervous tension so peculiar to town life.

If this be true, it follows that the best recreative elements in nature are those which most infallibly tend to revive our atrophied faculties and instincts. Among them the following are important:

First: Either perfect quiet, or an absence of all save primitive and natural sounds, such as those caused by the wind in the trees, by running or falling water, or by singing birds.

Second: Landscapes that relieve the eyes from close work by offering distant views, quiet harmonies of color, and a quiescent atmosphere, varied by occasional touches of movement in such objects as running or falling water, scurrying squirrels, or birds in flight.

Third: Accessible mountains, which encourage climbing and allow the visitor to combine the exhilaration of overcoming obstacles with the physical exercise attending the woodsman's mode of travel.

Fourth: Natural phenomena that make a purely intellectual or esthetic appeal, as do the conflicts between the great insentient forces of nature, the processes of geological upbuilding and destruction, the intimate inter-relations of plants and animals, and the contentions for mastery that are forever recurring throughout the whole realm of living things. We believe the last, the mental appeal, to be the element of greatest recreative value in nature, but the other three are only of slightly less importance.

The question may now be raised: "Can national parks meet these requirements any more fully than other uncultivated areas?" With the country in its present half developed state the objection has a certain degree of force. In this era one is inclined to think of the unprotected wilds as the silent, virginal and unspoiled regions of the earth, and to regard national parks as comparatively well-peopled areas where plants and animals are subjected to artificial restrictions. To a limited extent, and for the moment, this impression is a true one. But the objection will have less force in the course of a few years, and none whatever if by that time the full recreative possibilities of the parks have been realized. For the commercial exploitation of nature that is now going on so rapidly elsewhere is daily making the conditions we have described harder to seek, and is confining them more and more closely to the park areas, where the administrators should be taking measures to propagate and conserve them. By this we do not mean that the parks should in any way be conventionalized or transformed. On the contrary, it is their chief function to prevent just that disfigurement of the face of nature by industrial machinery which is being carried on at such a disastrous rate in other localities. We mean rather that the ideal recreative conditions now to be found in them should be preserved, that all factors disturbing to these conditions should be excluded, and that the artificial elements required for the practical work of administration should be disguised or beautified past offense.

Let us, however, take up these points in greater precision and detail.

The first necessity in adapting the parks for recreative purposes is to preserve natural conditions. In this respect a national and a city park are wholly different. A city park is of necessity arti-

ficial, in the beginning at least when the landscape is planned and laid out; but a national park is at its inception entirely natural, and is generally thereafter kept fairly immune from human interference. Herein lies the feature of supreme value in national parks; they furnish samples of the earth as it was before the advent of the white man. Accordingly, they should be life in their pristine condition as far as is compatible with the convenience of visitors. All necessary roads, trails, hotels and camps should be rendered inconspicuous, or, better still, invisible from the natural points of vantage in the parks. Another reason for retaining primitive conditions is that natural scenery unmarred by man is one of the finest known sources of esthetic pleasure. Any attempt to modify the appearance of a national park by laying out straight roads, constructing artificial lakes, trimming trees, clearing brush, draining marshes, or other such devices, is in the worst of bad taste.

As has already been intimated, the animal life of the parks is among their best recreative assets. The birds and mammals, large and small, the butterflies and the numerous other insects, even the reptiles and amphibians, are of interest to the visitor. As a stimulant to the senses of far sight and far hearing, faculties largely or altogether neglected in the present scheme of civilization, they are of no less consequence than the scenery, the solitude and the trails. To the natural charm of the landscape they add the witchery of movement. As soon as the general surroundings lose their novelty for the observer, any moving object in the landscape will catch his eye and fix his attention. People will walk miles and climb thousands of feet to secure a good view of falling water, and this desire for movement is even more completely satisfied by the sight of animals in motion. The moving deer, passing within range of the stage-coach, rouse exclamations of surprise and delight. Eagles and pigeons in flight overhead readily claim the traveler's notice, and the smaller birds often mingle the fascination of sprightly movement with that of bright color and pleasing song. Considering the predilections of the average visitor, we should perhaps regard these last as the most indispensable creatures in the parks.

The interest of moving objects depends upon a number of elements other than movement, among which their color, and especially their size, is important. The chipmunk is more attractive

than the ground squirrel, primarily because its movements are more rapid, and secondly because of its more brightly colored markings. But when movement and color are equal the average observer's selection seems to have a quantitative basis, though the rarity of the object, and its romantic or other associations affect the equation. A bear or a deer will elicit more interest than a smaller mammal, even though the latter be of a rarer species. There are exceptional cases where an animal's extreme rarity will make it of exceptional interest in spite of its inferior size, but in general the larger species are the more rare, as they are the first to disappear before human invasion. They have therefore a double claim to consideration, and measures should be taken to prevent their numbers from diminishing. After the visitor's initial curiosity has been aroused and his powers of observation developed, he may be trusted to give a closer study to the smaller species.

To realize the greatest profit, therefore, from the plant and animal life of the parks, their original balance should be maintained. No trees, whether living or dead, should be cut down, beyond those needed for building roads, or for practical elimination of danger from fire. The use of wood for fuel in power stations, or even for cooking and heating in hotels and camps, is made unnecessary by the abundant supply of water power everywhere available, and this may be utilized without marring the scenery in the slightest. Dead trees are in many respects as useful as living, and should be just as rigorously protected. The brilliant-hued woodpeckers that render such effective service in ridding the living trees of destructive insects depend in part on dead trees for a livelihood. In these they find food during the colder months of the year, when the insects elsewhere are in great scarcity. Here, too, they excavate their nesting holes. Some of the squirrels and chipmunks also seek shelter in dead or partially dead trees. Even down timber is an essential factor in upholding the balance of animal life, for fallen and decaying logs provide homes for wild rats and mice of various kinds, and these in their turn support many carnivorous birds and mammals, such as hawks, owls, foxes and martens.

No more undergrowth should be destroyed than is absolutely necessary. To many birds and mammals thickets are protective

havens into which their enemies find it difficult to penetrate. Moreover, the majority of the chapparal plants are berry-producers and give sustenance to wild pigeons, mountain quail, robins and thrushes, and to chipmunks and squirrels — this, too, at the most critical time of the year, when other kinds of food are scarce or altogether wanting. The removal of such plant growth will inevitably decrease the native animal life. If any change is to be made at all, it would, indeed, seem preferable to increase the number of indigenous berry-producing plants, especially in the vicinity of camps and buildings. This would compensate for the shrubbery lost in constructing roads and buildings, and would also serve to attract berry-eating species to the points where they might be seen by the largest number of people.

It goes almost without saying that the administration should strictly prohibit the hunting and trapping of any wild animals within the park limits. A justifiable exception may be made when specimens are required for scientific purposes by authorized representatives of public institutions, and it should be remarked in this connection that without a scientific investigation of the animal life in the parks, and an extensive collection of specimens, no thorough understanding of the conditions or of the practical problems they involve is possible. But the visiting public should be warned against injuring, and even against teasing or annoying any of the mammals, against destroying lizards and snakes (except the rattlesnake), and against disturbing the nests of birds, or their young. In the last instance a very slight disturbance will often lead to subsequent destruction. The principle underlying these suggestions is apparent. The native complement of animal life must everywhere be scrupulously guarded, particularly along the most traveled roads and paths, where the animals are likely to be observed by the greatest number of visitors. It is there that each individual animal is of highest intrinsic value from an esthetic viewpoint.

As a rule, predaceous animals should be left unmolested and allowed to retain their primitive relation to the rest of the fauna, even though this may entail a considerable annual levy on the animals forming their prey. We, as naturalists, are convinced that the normal rate of reproduction among the wild non-predaceous species, such as mice and squirrels, has adjusted itself to meet

a certain annual draft on their population by carnivorous enemies. Another point worth emphasizing is that many of the predatory animals, like the marten, the fisher, the fox and the golden eagle, are themselves exceedingly interesting members of the fauna, and as their number is already kept within proper limits by the available food supply, nothing is to be gained by reducing it still further. Here again may be recognized the special and intimate relations everywhere existing among the various plants and animals.

The rule that predaceous animals be safeguarded admits of occasional exceptions, according to season, place and circumstance. Coyotes and bob-cats, especially the latter, when they are numerous, are likely to kill a great many grouse, quail, rabbits and squirrels. Cooper and sharp-shinned hawks, and, to a lesser extent, blue jays, are proven menaces to small birds, and it might be advisable to reduce them in the neighborhood of camps and much-traveled roads. Caution, however, should be exercised in doing so, and no step taken to diminish the numbers of any of these predators, except on the best of grounds.

We would urge the rigid exclusion of domestic cats and dogs from national parks. Cats are the relentless enemies of small birds; they are forever on the alert, and in ninety-nine cases out of a hundred cannot be trusted, however well fed they may have been at home, to let birds alone. The fact that they readily go wild, that is, quickly revert to a feral state, makes it all the more important that they be kept out of unsettled regions. To admit them would mean adding one more predator to the original fauna, and this would tend to disturb the original balance, by making the maintenance of a normal bird population difficult or impossible.

Equal vigilance should be used to exclude all non-native species from the parks, even though they be non-predaceous. In the finely adjusted balance already established between the native animal life and the food supply, there is no room for the interpolation of an additional species. If pheasants be introduced, and allowed to become established in the wild, the native quail and grouse will inevitably suffer from competition with them at the season of minimum food supply, and will be numerically reduced in consequence. The same is true of elk in competition with the native deer, and of many imported small birds in rivalry with native

varieties. In the latter connection we need only mention the well known instance of the English sparrow. Cattle and sheep are also of importance as elements hostile to natural conditions, but their destructiveness has already been emphasized by foresters.

Thus far we have laid chief stress on the importance of the national parks to recreation, and have shown the necessity, in adapting them for this purpose, of retaining the original balance in plant and animal life. But the same necessity attaches to their adaptation for another end, hardly less important than recreation, namely, research in natural history. As the settlement of the country progresses and the original aspect of nature is altered, the national parks will probably be the only areas remaining unspoiled for scientific study, and this is of the more significance when we consider how far the scientific methods of investigating nature then obtaining will be in advance of those now applied to the same study.

As a final requirement, we would urge that provision be made in every large national park for a trained resident naturalist who, as a member of the park staff, would look after the interests of the animal life of the region and aid in making it known to the public. His main duty would be to familiarize himself through intensive study with the natural conditions and interrelations of the park fauna, and to make practical recommendations for their maintenance. Plans to decrease the number of any of the predatory species would be carried out only with his sanction and under his direction. He would be able to establish and supervise local feeding places for birds and mammals during the tourist season, and could do this without in any serious degree altering natural conditions. His acquaintance with the local fauna would enable him to communicate matters of interest to the public in popularly styled illustrated leaflets and newspaper articles, on sign posts, and by lectures and demonstrations at central camps. He would help awaken people to a livelier interest in wild life, and to a healthy and intelligent curiosity about things of nature. Our experience has persuaded us that the average camper in the mountains is hungry for information about the animal life he encounters. A few suggestions are usually sufficient to make him eager to acquire his natural history at first-hand, with the result that

the recreative value of his few days or weeks in the open is greatly enhanced.

We have attempted in these pages to emphasize the value of national parks as places for recreation and for scientific research, two of their uses that have been rather commonly overlooked, and to show the importance in both connections of the animal life they contain. If the reasons and instances we have adduced are valid, there is surely ample warrant for saying that the animals in the parks should be given more care and attention than they are now receiving, and that they should be conserved and utilized to a fuller extent.

## NATIONAL PARK PAINTINGS

The influence of the National Parks and National Monuments on American art has been increasingly apparent during the past few years, and a distinct school of national scenery artists has grown up. In January and February, 1917, a notable collection of paintings of subjects mostly, but not entirely, found in the National Parks and Monuments, was held in Washington, D. C., and as an indication of this trend of American art we give the list of artists and painting herewith:

By Dean Babcock, four scenes in the Rocky Mountain National Park, entitled "The Twin Sisters," "A Glimpse of the Range," "The Explorers" and "The Crags."

By Albert Bierstadt, a scene in the Sequoia National Park entitled "Mount Whitney," and one in the Rocky Mountain National Park entitled "Whyte's Lake, Estes Park, Colorado."

By Howard Russell Butler, a view in Mesa Verde National Park entitled "Sunrise Near Mesa Verde;" and a scene in the Grand Canyon National Monument entitled "Sunshine and Shadow in the Grand Canyon, Arizona."

By Elliott Daingerfield, two Grand Canyon views entitled "Trees on the Rim of the Grand Canyon" and "From Rim to Rim of the Grand Canyon."

By W. Herbert Dunton, three paintings: "Late Into Camp," "The Hunter's Supper," and "The Start for the Hills."

By J. R. Fountain, a scene in Crater Lake National Park entitled "Crater Lake, Oregon."

By Albert L. Groll, a painting of "Laguna Pueblo," New Mexico.

By James Henry Harper, "Sunset on the Oregon Trail."

By W. Victor Higgins, a painting entitled "Chile Venders, Taos," done at Taos Pueblo, N. M.

By Thomas Hill, a scene in the Yosemite National Park entitled "Yosemite Valley."

By Sydney M. Laurence, an Alaskan scene called "The Trapper," and another called "Mount McKinley."

By William R. Leigh, "Grand Canyon."

By Thomas Moran, a scene in Rocky Mountain National Park entitled "A Rocky Mountain Solitude," and three Grand Canyon views entitled "In the Grand Canyon of the Colorado," "Grand Canyon of the Yellowstone," and "Grand Canyon of Arizona on the Santa Fe."

By De Witt Parshall, "The Hermit Creek Canyon," "Isis Peak," and "Granite Gorge," all in the Grand Canyon of Arizona.

By Sheldon Parsons, a scene in the Arizona Grand Canyon entitled "Morning in the Canyon."

By F. C. Peyraud, "Afternoon in the Grand Canyon."

By Edward H. Potthast, two Arizona Grand Canyon scenes entitled "The Chasm" and "Bright Angel Canyon of Arizona on the Santa Fe."

By Arthur J. E. Powell, two scenes in Glacier National Park entitled "St. Mary's Lake" and "Grinnell Lake and Glacier."

By Lucien W. Powell, "Grand Canyon of the Yellowstone."

By William Ritschel, "Awakening of the Grand Canyon of Arizona."

By Carl Rungius, a scene in the Yellowstone National Park, called "Near Timberline, Bridges Forest Reserve, Wyoming."

By Birger Sandzen, "Sunset in the Mountains, Colorado," painted in the Rocky Mountain National Park; "The Arapahoes," in the same park; and "Sunset in the Grand Canyon," Arizona.

By E. Serbaroli, "Mount Tamalpais," California.

By J. H. Twachtman, "Waterfall, Yellowstone Park."

By Walter Ufer, "Indian Gardens," a scene in the Grand Canyon, Arizona.

By Peter Van Veen, "Mount Rockwell, Glacier National Park."

By F. Ballard Williams, "Grand View, The Grand Canyon of Arizona on the Santa Fe."

## "MOUNT RAINIER" OR "MOUNT TACOMA"

### Historic Controversy Over a Place-Name

A controversy of over 35 years' standing concerning the name of Mount Rainier, in the State of Washington, was renewed with great earnestness in 1917. This is probably the most famous contest over a place-name in the geographic nomenclature of the United States. Based, as it is, mainly on historical considerations, it has more than local interest, and we feel warranted in giving considerable space to the subject in this Report.

On April 18, 1917, a mass meeting was held in the city of Tacoma, Wash., resulting in the formation of a committee called "The Justice-to-the-Mountain Committee," the object of which is to secure the restoration of the name Mount Tacoma to Mount Rainier. The Hon. A. V. Fawcett, Mayor of Tacoma, is chairman of the committee.

The renewed movement for the renaming of Mount Rainier has the endorsement of the Tacoma Commercial Club, the Tacoma Chamber of Commerce, the Legislature of the State of Washington, and many other bodies and individuals. Among the latter is Hon. Franklin K. Lane, Secretary of the Interior, who, in a published letter (September 22, 1915) wrote: "The fact is, nobody likes the name Mount Rainier." The Legislature of Washington adopted a memorial addressed to the National Geographic Board asking for the substitution of the name Tacoma.

In August, 1917, the subject attracted considerable attention in the columns of the New York newspapers. During this month, Mr. John Muir of New Rochelle, N. Y., in a letter to the New York Times, threw an interesting if unimportant side-light on the discussion, as follows:

In 1883 I was Traffic Manager of the completed Northern Pacific Railroad. Charles B. Wright of Philadelphia was a powerful Director, was President of the Tacoma Land Company, and had succeeded in getting Tacoma declared the official terminus of the road. It was seen then that Seattle was to be the more important city.

In a monthly folder I referred to "Seattle, the Queen City of the Sound." I received a letter from the President of the road, stating that Charles B. Wright had made a complaint because of giving Seattle this distinction, and in the succeeding issue the sentence read, "Tacoma and Seattle, the two Queen Cities of the Sound."

It was Charles B. Wright who, with official power, insisted on calling the mountain Tacoma, and it was not until he had withdrawn from the directory and his influence had passed that "Rainier" again received Northern Pacific recognition.

### The Argument for "Mount Rainier"

In 1917, Dr. C. Hart Merriam of the National Geographic Board prepared a statement in support of the board's action in giving the name of Rainier to the mountain. Referring to the arguments of the Tacomans that the name Tacoma is necessary in the interests of "Justice to the mountain," Dr. Merriam replies as follows:

"The logic of this claim is hard to find; on the other hand, it may truthfully be said that the name Rainier should be retained in justice to its discoverer, in justice to the science of geography, and in justice to the principle of permanence in geographic names.

"Is it not the plain duty of this board to safeguard long-established names? If not, if we are to be influenced by such inaccurate statements and admittedly sentimental arguments as have been made before us, what will be the future of geographic nomenclature? As has been well said by George Otis Smith, Director of the United States Geological Survey, there is no more reason for changing the name of Mount Rainier than for changing the names of other features in the same region, all mapped and named at the same time by the same man (Vancouver).

"And it may be added without fear of contradiction that whatever argument has been made or may be made in favor of setting aside the name Mount Rainier for an Indian name applies with equal or greater force to Mounts McKinley, Wrangel, St. Elias, Logan, Fairweather, Crillon, Olympus, Baker, Adams, St. Helens, Hood, Jefferson, Three Sisters, Pitt, Lassen, Brewer, Whitney, San Bernardino, San Jacinto, and a host of others — each of which has an Indian name that with equal reason might be substituted for the one now on our maps.

"The geographers of America from the time of Wilkes, Mitchell, Guyot, Fremont, and the Pacific Railroad surveys to the more recent labors of the Hayden, Wheeler and Powell surveys,

supplemented by the present United States Geological Survey and the Coast and Geodetic Survey, and by the efforts of the Canadian and Mexican Boundary Commissions, have stood without exception for the perpetuation of established geographic names. The same spirit, I am happy to say, was shown by the unanimous action of this board in its refusal twenty-seven years ago to change the name of Mount Rainier.

"What is the source of this agitation for a change of name? As every one knows, it originated in the City of Tacoma, where in the year 1883 it was proposed by the Northern Pacific Railroad, which had then selected Tacoma as its western terminus. But even the Northern Pacific Railroad Company, which had been responsible for the entire controversy, yielded to the decision of the Geographic Board and adopted the name Rainier on all its literature, and has continued to do so from 1890 to the present day. In an article in The Seattle Post-Intelligencer, March 13, 1916, the General Passenger Agent of the Northern Pacific was quoted as saying to a delegation of Tacoma people who had protested against the use of the name Rainier:

"'Gentlemen, we have carried this farce as far as we are going to for advertising purposes. The name has been officially declared to be Rainier, and that is what we shall call it, you can call it what you please.'

"After a reasonable search of the literature relating to the Northwest in general and the State of Washington in particular, including histories, guides, books on travel and exploration, scientific publications, and magazine articles, and of the standard dictionaries, encyclopedias, gazetteers, and atlases of the world, it appears that, apart from documents and folders treating of or emanating from the City of Tacoma, more than 90 per cent use the name Mount Rainier exclusively.

"In the bibliography of Washington geology and geography, published by the State of Washington in 1913, forty-seven publications on Mount Rainier are enumerated, forty-six of which use the name Rainier and one the name Tacoma.

"In the publications of the Western societies of mountain climbers — the Sierra Club of California, the Mazamas of Oregon, the Mountaineers of Washington — and in the official Government publications relating to Mount Rainier National Park, the name Mount Rainier is used exclusively.

"Of ten standard dictionaries, encyclopedias, and gazetteers consulted one gives preference to Tacoma; all others give Rainier either exclusively or followed by the word Tacoma in parentheses.

"Of thirteen standard atlases of recent date, nine use the name Mount Rainier exclusively, while four give Rainier followed by Tacoma in parentheses. Not one gives preference to Tacoma.

"Of seventeen foreign atlases consulted in the Library of Congress, all, without exception, use the name Mount Rainier."

Dr. Merriam next points out how the argument has been made that the word Tacoma is the native Indian name of Mount Rainier and that it is a specific name applied to this mountain and no other. What he terms the fallacy of this position he proceeds to handle as follows:

"First, let it be understood that the tribes of the Puget Sound region — the Dwamish, Lummi, Nisqually, Puyallup, Skagit, Snohomish, Snokwalmu, Stilakwamish, Tulalip, and a few others — all belong to a common stock, the Salish, and that the word Tah-ho-mah or Tah-ho-bet, irrespective of details of dialetic spelling and pronunciation, means a high snow mountain, and was applied by the various tribes to the nearest snow mountain in their vicinity. Thus, according to the Indian speaking, it was used alike for Mount Baker, Mount St. Helena, Mount Rainier, and Mount Adams. Among ethnologists the fact is well known that it is the custom of Indians to speak of their mountain as the mountain, their river as the river, and so on.

"We are now asked, without the submission of any additional evidence or reason, to reverse the decision rendered by this board in 1890 — a decision arrived at after due deliberation by such eminent and fair-minded geographers as Henry Gannett, then chief geographer of the Geographical Survey; Marcus Baker, of the Geological and Coast Surveys; Thomas Mendenhall, then head of the Coast and Geodetic Survey, and Richardson Clover, now admiral, then chief hydrographic officer of the navy.

"And, furthermore, is it not fair to ask — with apologies to the good citizens of Tacoma — why their city should insist on appropriating as a local asset the central figure and culminating glory of Mount Rainier National Park? And is it not fair to suggest, since the mountain is the property of the United States, that its name is a matter of concern to the people of the whole United States? And have the people of the United States, outside of Tacoma, shown any dissatisfaction with the name Rainier? And were this board to change the name, is there any probability that the people of the United States at large would accept the change, or that the nations of the world would remove the present name from their charts and maps?

"In view of all the facts is it not the obvious duty of the board to preserve the name bestowed by Vancouver 125 years ago — a name accepted and established by general adoption in the geographies, histories, atlases, dictionaries, gazetteers, and encyclopedias

of the world, confirmed by official act of the Congress of the United States in creating the Mount Rainier National Park (act of Congress of March 2, 1899) and unalterably fixed by the all but universal usage of the civilized nations?"

### The Argument for "Mount Tacoma"

The argument in favor of the name Mount Tacoma is not new. In fact, there is hardly anything new to be said in favor of it. Perhaps the most learned plea in its favor was made fifteen years ago by Hon. James Wickersham before the Tacoma Academy of Science. The meeting was held on February 8, 1893. Many old settlers and prominent citizens were present.

The gathering also included five Indians from the Puyallup, Nisqually and Klickitat tribes. The latter were faultlessly dressed, especially the men, who even wore cravats. Their testimony was as follows:

George Leschi, a son of Quiemuth, a leader in the Indian war of 1855, said: "I can't talk much, but the name of the mountain is 'Tacobet' and the Klickitats call it 'Tahoma.' I am about three-quarters Klickitat."

Jack Simmons said: "Always was this mountain (pointing to it) called 'Tacobet.' I think Tacoma is the closest name that white men call. All the La Conner Indians and all over the sound give you his name 'Tacobet.'"

John Powers said: "My mother was an Indian and my father a white man. The only name the mountain is called by Indians is 'Tacobet'—'Tacobet' that all the name it called."

John Hiaton, over 80 years old, one of the patriarchs of the reservation and a signer of the treaty of 1854, spoke through an interpreter: "I see all the ladies and gentlemen. I am going to call the name of the mountain — the name God gave it. God put me down here before you came here. He put me here for seed — perhaps he sent you here. My people call mountain 'Tacobet' — George, his name (pointing to George); 'Tacobet' mountain's name — nobody can change — that is all."

Mrs. John Hiaton was the fifth Indian, but did not speak.

Several old settlers and pioneers gave similar testimony.

### Judge Wickersham's Paper

Judge Wickersham's paper was then read. It displays so much research that we give it in full. The reader should remember that it was written fifteen years ago, and that since that time the Mount Rainier National Park has been created in realization of his desire.

The recent action of President Harrison in reserving from disposal under the public land laws a tract of more than 200,000 acres surrounding "Tacoma," the royal mountain peak, is of great interest to the people of Pierce County and the City of Tacoma. It is expected, of course, that this city will be the point to which all tourists will hereafter come on their way to examine the stupendous glaciers of this most lordly of American mountains, and, it is, consequently, of great interest to our people to see to it that everything concerning this proposed park be well done — honestly, fairly and patriotically. It is the most famous mountain peak in our country; celebrated the globe over for its simple grandeur, and it behooves our people to protect it, and the park around it, jealously and with sleepless vigilance.

Little can be done now, but that little is of vast importance. A proper and fitting name for this great cone, and the park around it, must be officially announced. When this official announcement is once made it will be impossible to change it. It will be used in song and story; in tradition and history; poets, authors, tourists, newspapers and the scientific bodies of the world will adopt it, and it will never change.

What name shall be forever perpetuated by being thus officially attached to this mountain peak? Shall it be called "Mount Rainier" or "Tacoma?" Has it a name, and, if so, what is it? Has it more than one, and, if so, which has the better right to be officially adopted and preserved? What are the facts? What do honesty, euphony, simplicity, poetry, tradition, history and patriotism require of us? Let us view the facts, try the cause, hear the evidence, and then decide.

In the preparation of this article no attention has been paid to literary effect; the only effort has been to obtain facts by the best method possible in such a case as this — by letters from prominent people who understand the facts, know our history, and talk the language of the Indians; by certain certificates signed by old Indians, who, of course, know the truth, and by an appeal to records, papers, books and all honest sources of information. The writer has, during the past year, written the Puyallup-Nesqually Indian language, and has also preserved many of their myths, tra-

ditions and stories concerning this (to them) great, mysterious mountain. A special effort has been made to get a correct Indian nomenclature of this region, and to no name has so much attention been paid as to the Indian name for this lordly mountain, from the perpetual glaciers of which spring the water of the White, Carbon, Puyallup, Nesqually, Des Chutes, Chehalis and Cowlitz rivers.

*Spanish Discoveries*

More than a century ago, in 1774, the Spaniards saw the Olympic mountains and named Olympus, Sierra de Santa Rosalia. In 1790 they explored the hitherto fabulous straits of Anian, and entered a land-locked bay which they named Port Quadra. From Port Quadra they explored the waters of the great roadstead to the southeast, which they named Canal de Caamano. Rosario Straits, Galiano Island, Fidalgo Island, Caamano Island, and many other names are preserved by reason of these first explorers furnishing Vancouver with their maps and charts in 1792, when he visited the same waters. The Spaniards explored the exact spot in 1790 from which Vancouver named " Mount Rainier " in 1792. They lived for weeks in daily sight of Mount Baker, a name bestowed by Vancouver, because a member of his crew by that name was the first one of his expedition to see it. Did the Spaniards name " Mount Tacoma," and, if so, what name did they give it? They saw it two years before Vancouver did, and his was not a discovery, but, at best, only a naming.

*English Discoveries*

In May, 1792, Vancouver entered the Straits of de Fuca and cast anchor in Discovery Bay, the Port Quadra of the Spaniards. Leaving his vessels there to repair, he explored what we now call Admiralty Inlet and Puget Sound in small boats. As the little fleet rounded the long sand point and coasted down into Port Townsend Bay, Vancouver records that a " very remarkable high, round mountain, covered with snow, apparently at the southern extremity of the distant range of snowy mountains before noticed, bore S. 45 E." Later on, while in the Canal de Caamano, of the Spaniards, in speaking of the range of mountains now known as the Cascades, he says: " At its northern extremity, Mount Baker bore by compass N. 22 E.; the round, snowy mountain, now forming its southern extremity, and which, after my friend, Rear Admiral Rainier, I distinguished by the name of ' Mount Rainier,' bore N. 42 E."

And thus, at a distance of over one hundred miles, Vancouver named this grand white-capped summit after a foreigner who rep-

resented nothing to our American civilization, and who not only never saw the mountain bearing his name, but who never saw the continent upon which it is so conspicuous a landmark. Vancouver held no communication with the Indians, and seemed to have had the greatest contempt for them, and made no effort to ascertain the names, if any they had, for the rivers, mountains, bays and other natural features of this virgin world.

At every turn he fastened the name of an obscure friend (whose only claim to this high honor was an acquaintance with Vancouver) to some prominent feature in the Puget Sound landscape. Out of this medley the name of Rainier was thus bestowed by him on the most perfect cone in that long line of extinct volcanoes, standing cold and lifeless, in the great continental range. Vancouver explored and named Puget Sound after his lieutenant, Peter Puget, and then sailed away to Nootka, never again to see the points upon which he so recklessly flung the names of his unknown friends; and this is the history of the name of "Mount Rainier."

*The American Name*

Is "Tacoma" the American name for this mountain, and what does the word mean? Should "Tacoma" be perpetuated and "Rainier" abandoned? Is the one as honestly entitled to recognition as the other? Let the following eminent authorities answer the question:

"Vancouver, Wash., April 3, 1892.

"Hon. James Wickersham, Tacoma, Wash.

"Dear Sir: Some time ago I received a note from you asking me to say where the word 'Tacoma' came from. The word belongs to the Scadgit Indian language, and means plenty of food or nourishment; and hence, a woman who had plenty nourishment in her breasts was called 'Tacoma sladah,' or the 'motherly woman,' and in the course of time the nourishing breast of a woman was called 'Tacoma,' because it furnished plenty of food for the young, and the snow-capped mountains were called 'Haik-Tacomas,' because they resembled a woman's breasts, and were supposed to furnish plenty of nourishment to the lesser mountains. 'Haik Tacomas,' the great mother of mountains.

"'Tacoma,' the Indian town, was so called from the fact that plenty of natural food was easily obtained at that place, the mother of towns.

"The first author that I remember using the word was Theodore Winthrop; he called the snow peaks 'Tacomas.'

"I am most respectfully yours,

"B. F. Shaw."

Colonel Shaw was the interpreter at the Nesqually treaty of 1854, and commanded the Washington Volunteers in the war that followed. He is one of the most competent Indian scholars in the Northwest, and his statement is entitled to great weight. He is now a member of the State Senate.

"Port Townsend, Jefferson County
"State of Washington, February 3, 1892.

"Hon. James Wickersham, Tacoma, Wash.

"Dear Sir: Your letter of the 1st inquiring about the origin and meaning of the word 'Tacoma' was received this morning. It seems to be impossible for the average white man either to pronounce or write an Indian word correctly. 'Tacoma' is the white man's rendering of the Nesqually and Puyallup word 'Ta-ho-ma' or 'Tah-o-mah,' with a strong accent on the first syllable. The words means snow mountains or white mountain. The Clallam name for Mount Baker is 'P'kowitz,' 'Puhkdwhite,' 'Kowitz' mountains. The Indian is thoroughly practical in his every day talk. He calls things by their right names without any attempt at poetic imagery. White poets make up their fancy names and descriptions. There are Indian orators who use ornate and poetic language, like white orators and poets, but the rank and file of the Indian men and women express themselves in very plain, common talk.

"In the California Illustrated Magazine, No. 2, Vol. 1, January, 1892, is an interesting article by Charles Lummis, entitled, 'The City of the Sky; Acoma.' The foot note says this is pronounced 'Ah-ca-ma,' accent on the first syllable. This is a strange stone island 7000 feet above the level of the sea. Upon the bare table top of this strange island, in the desert, stands a town of matchless interest, the home of half a thousand quaint lives and of half a thousand years' romance. This 'City of the Sky' is in the western half of New Mexico, thirteen miles south of the Atlantic and Pacific Railroad. My attention was called to it from the similarity of names — 'Ah-co-mah,' the 'City of the Sky,' and 'Tah-co-ma,' the 'snow-covered mountains.'

"Both words, though of different languages, indicate something high up. I do not know that there is any affinity in the languages, the Nesqually, or Puyallup, and the Zuni, but there is an interesting coincidence.

"The late Dr. Wm. Fraser Tolmie, who was stationed at Nesqually for the Hudson Bay Company, in early times, gave great attention to the study of Indian languages, and is considered an authority. He always told me that the word 'Ta-ho-mah' means a white, snow-covered mountain.

"The Indian word 'Quil-ley-hute' is by the white man spelled and pronounced 'Quilleute,' and so of almost every Indian word, and especially the names of places. When a person can neither pronounce or spell one Indian word correctly, their florid descriptions of the meaning should be taken *cum grano salis.*

"Very cordially yours,

"JAMES G. SWAN."

Judge Swan has a reputation second to none on our Coast as an ethnologist — his life-long study of our Indians, his labors for the Smithsonian Institution and his many interesting articles on the Indians of this Coast have given him great weight as an authority.

The Tacoma *Morning Globe,* of Sunday, August 3, 1890, contains a very interesting article by John Flett, recently deceased, about the name of the mountain. No one was more competent than Mr. Flett, who came to Puget Sound in 1841, and the following is his language:

"It was no novelty to me to hear the conference between a number of Indians and Hon. Elwood Evans, which occurred in June, 1882, at his law office, in New Tacoma, on Pacific Avenue, in the second story of S. M. Nolan's store. That gentleman requested me (I was then employed at the Puyallup Indian reservation) to invite several old reliable Indians to visit him and give information as to the name among Indians of the mountain called by the whites 'Mount Rainier.' Before that time, and in fact at the time I first came to the Puget Sound country (1841), I had heard the Indians from the east side of the mountains (the Klickitats) call it 'Ta-ho-ma.' I interpreted for Mr. Evans. He put his questions in English or Chinook jargon. The questions, or his words, were put in native Indian to the old men. The old Indians, in reply to me, said that the name 'Tahoma,' applied by them to that mountain, meant a woman's breast or 'pap' that feeds 'tootoosh' or milk; that the 'earth was their mother, for she had fed them, and Tahoma given them drink, and overflowed and made the grass grow rich from the white water that flowed from her.' I, at the time, translated their guttural expressions, which resulted in aggregating the word 'Tahoma,' though really, no two Indians pronounced the word exactly alike."

The following is the result of that interview, as given by Judge Evans in his Fourth of July address at Puyallup that year:

"This grand lesson stamped its impress upon the native mind — inspired the Indians' imagination. It originated for this Colossus among mountains the poetic name of Tak-homa, with a meaning full of poetic significance. Literally translated, 'a

woman's breast that feeds.' How aptly is expressed that conical pile of eternal snow, which by the genial heat from heaven's own luminary sends down the waters which feed and enrich so vast a region! How true that thought, how happy that idea, for out of those secret urns in the deep recesses of old Rainier proceed those numerous rivers which fertilize the rich valleys of the Puget Sound basin and the valleys of the Yakima!"

"Olympia, Washington, Feb. 8, 1892.

"Hon. James Wickersham, Tacoma, Wash.

"Dear Sir: Your esteemed favor is at hand asking for information in regard to the word 'Tacoma.' I do not think I can enlighten you on the subject. I was at one time Superintendent of Indian affairs for the Territory of Washington, and made some effort to get the meaning and origin of Indian words. I think the present word 'Tacoma' is a corruption of the Indian word 'Tacopa,' or 'Ta-co-pe,' which, in Indian, means white—'Ta-co-pa Illi-he' or white land. This name, I think, was pretty generally given the mountains by the Indians, particularly by the Nesquallies, Puyallups, Muckleshoots and Squaksons.

"Very truly,

"J. T. McKenney."

Some time ago *Every Sunday* contained a short article on "Tacoma," from which the following is extracted:

"C. P. Ferry (the Duke of Tacoma) has not only been a resident of Commencement Bay as long as any other resident, but as an apt scholar he is doubtless more familiar than anyone else with mountain nomenclature and fiction legends. On returning from Europe, he was interviewed by a *Globe* reporter, and said, among other things, that about the first thing he heard when he landed was that Seattle is still kicking about the name of Mount Tacoma, and that made him tired. 'Why,' said he, 'I thought that controversy was dead long ago. It is preposterous; the idea of calling that mountain by any other name than Mount Tacoma. The idea that we named the mountain after the city is preposterous. Where do they think we got the name Tacoma from for the city? We didn't invent it. Where had we ever heard it? Why, it was the name of the mountain, and we named the city after the mountain. I named the city and I named it after the mountain. Where did the mountain get the name? Why, the Indians always called it by that name, 'Ta-ho-ma.' When this city had its beginning, all about here was primeval forests; Indians dwelt along this shore and on the shore across Commencement Bay. They all called the mountain 'Ta-ho-ma.' We learned the name from the Indians;

that's all there is about it. The name we gave the city was the nearest expression that English orthography could give to the Indian guttural name 'Ta-ho-ma.' Why, when General McCarver, my father-in-law, laid out the first townsite over in Old Town, he came down to Portland with the plans to draft the papers. He proposed to call it 'Commencement Bay' after the bay. I said at once that that would never do. The name was not pretty, and it was too big and ungainly; besides it would open the way to ridicule — just think of naming a town Commencement Bay City! 'Tahoma,' the name of the mountain, popped into my head, and we changed the name to 'Tacoma.' That was the way it was. This city was named in Portland, and it was named after the mountain. And 'Tahoma' is the name of the mountain."

"Olympia, Wash., Feb. 11, 1892.

"Hon. James Wickersham, Tacoma, Wash.

"Dear Sir: In reply to yours of the 1st inst., asking for such information as I can give concerning the origin and meaning of the word 'Tacoma:' Without particularly referring to your several questions, I will say that I have during my long residence on the Sound, talked with many people, both Indians and whites, who, from their opportunities, would be likely to know something of the matter, and that from all the information I have been able to gather, I am of the opinion that the word 'Tacoma' is of Indian origin, and that the most extended meaning that can be given to it is 'white mountain.'

"I say the 'most extended meaning' for the reason that I have talked with intelligent Indians, who assert that 'Tacoma' (they generally pronounce it 'Ta-ho-ma') simply means 'mountain,' and that it applies to any mountain, whether it has snow on it or not. I think, however, that 'white mountain' is the meaning of the word, for the reasons hereinafter mentioned:

"I conclude that the word is of Indian origin from the fact that the Indians generally, not only upon the Sound, but east of the Cascades, so far as I am informed, recognize it as such, and as the name of 'Mount Ranier,' so-called. And second, because I know of no claim from any quarter that the word, or any word resembling it in sound, of other than Indian origin, was ever applied as the name for that or any other mountain.

"I conclude that the meaning of the word is 'white mountain.' First, because the very best authorities — that is, those who have the best means of informing themselves upon the subject, say that the word means 'white mountain.' And secondly, because 'Tacoma' is pre-eminently a white mountain, and that therefore that is the name which the Indians living within its sight would

naturally give it, and the only one which other tribes of Indians would accept, it being purely descriptive.

"As I have already remarked, the Indians generally, on both sides of the mountains, recognize 'Tacoma' as the name of this particular peak, and it strikes me that they do so because this name is strikingly descriptive of it.

"As 'Tacoma' has been accepted and used as the name of the mountain in question by various tribes of Indians for an indefinite number of years, I, at least, have found it impracticable to determine what tribe used it first. It occurs to me, however, which is mere matter of conjecture, that places and things generally first receive their names from those who live upon or near them, as probable that the name 'Tacoma' originated with the people living on the Nesqually at the foot of it, and in constant view of said mountain, and that such name was naturally accepted and adopted by other tribes in speaking of the people living at the foot of Mount Tacoma and their country, until it became general, as seems to have been the case with the Indians, as I have pointed out in this matter.

"What generations have come and gone since this mountain was named 'Tacoma' or 'Tahoma,' is, I think, beyond successful human investigation.

"Regretting that I cannot give you more satisfactory information on the subject,

"I am, yours truly,

"Francis Henry."

In the *American Anthropologist* for January, 1892, is an article on "Aboriginal Geographic Names," by Rev. Myron Eells, of the Skokomish Reservation, a high authority on such matters.

Mr. Eells says:

"Mr. M. W. Walker, who has lived much among the Indians on the east side of the Cascade mountains, is confident that the word originated among some of those Indians, probably the Tahamas, was originally Tah-ho-ma, and meant 'the gods.'

"In Southern Oregon is a tribe of Indians named the 'Acho-mawi,' and Powers, in 'Contributions to North American Ethnology,' gives the derivation of this name from 'A-cho-ma,' a river. 'Acoma, the City of the Sky,' is an ancient pueblo in New Mexico. Its unique position on the summit of a table mountain, many hundred feet high, its inaccessibility, history, age, air of mystery and ancient civilization, gives it an interest second to none in our country, but to us it is of peculiar interest, on account of the name which is pronounced 'Ah-co-mah.'"

Not long since the following clipping was published in the Tacoma *Ledger,* speaking of the onyx quarries of the State of Pueblo, Mexico: "Since the Mexican Central Railroad from Pueblo to Tecomavaca was opened, no less than 1,000 tons of onyx have passed over it." Due west from the City of Mexico, in the State of Coilma, is the City of "Tecoman," which has the exact pronunciation given by Mr. Peter Stanup to one of his forms of the Indian name of the mountain.

The Pima Indians of Arizona call the Gila river "Ackomah," while the first known Indian chief at Nootka, Maquina, called his head wife "Arcomah," or the queen, a general name for her title. In Volume 6, North American Sylva, Nuttal, page 74, is a description of the trumpet flower, "Tecoma Radicans," with a foot note by the author, which reads that the name is from Tecomaxochitl, the aboriginal Mexican name of one of the species.

One of the principal tribes of the Coahuiltican family of northern Mexico and southern Texas is the "Tecame," the pronunciation of which differs but little from our word "Tacoma." In the Seventh Annual Report of the Bureau of Ethnology, under the title of the "Copelan Family," a reference is made to the sub-tribe "My-acoma," situated in northern California.

In the "Mountains of Oregon," by W. G. Steele, of the Oregon Alpine Club, at page 55, is an interesting letter from Edwin Eells, United States Indian Agent for the Puyallup and Consolidated Agencies, dated December 8, 1886, in which Mr. Eells says:

"The Indian word 'Ta-co-bet' or 'Takeman,' the first being the most general pronunciation used among the Indians, but both words are used, being the different pronunciation used by the dialects. It means a white mountain, and is a general name for any high, snow-covered or white, treeless peak. It is applied to this mountain by the Indians of this vicinity, because it is the only or most prominent one of this kind in the vicinity. They use the word as we would speak of 'the white mountain,' there being but one near us. In the Skadget language the word is a little different, and is there called Ko-ma, and is applied by these Indians to Mount Baker, it being the mountain in that vicinity of the kind. The word 'squatch,' or 'squat-letch,' is the general name for a range of mountains, while 'Ta-ko-bet' or 'Ta-ko-man' or 'Ko-ma,' is the name of the snow-covered, or white, peaks in the range."

P. B. Van Trump, of Yelm, the most indefatigable mountaineer in Washington, whose accomplishments drew from Hon. Elwood Evans the expression of "that splendid scholar and writer, P. B. Van Trump, Esq.," is quoted in the *American Anthropologist,* of

January, 1892, in Rev. Myron Eells' article on "Aboriginal Geographic Names," as follows:

"The first Indian I heard pronounce the name of the mountain was old Sluiskin, who guided General Stevens and myself to the snow line when we made the first ascent to the summit, in 1870. Sluiskin's pronunciation, as near as I can represent it by letters, was Tah-ho-mah, and in his rendering of it there was, besides its music, an accent of awe and reverence, for Sluiskin was very imaginative and superstitious about Tahoma, believing that its hoary summit was the abode of a powerful spirit, who was the author of its eruptions and avalanches, and who would visit dire vengeance on any mortal who would dare to invade (if that were possible) his dread abode. When Stevens and I were encamped at the foot of the snow line we would often be awakened by the thunder of falling rocks or the deep thud of some avalanche. At such times Sluiskin would start from his blanket and repeat a dismal, dirge-like song as though he would appease the mountain spirit. Mishell Henry, another old Indian guide to the two-named mountain, prides himself in giving its true name. He has several times drilled me in pronouncing it, always smiling gravely and dignified at my ineffectual attempts to give his deep chest notes. Henry was the first to mark out the present route to the snow line, and even ascend it for two miles without leaving the saddle. He guided our party (the Bayley party) in 1883, and himself ascended to the 8000-foot level. Beyond that nothing could tempt him, for beyond, in his view, lay danger, folly, rashness; for even Henry, who is intelligent, and much more of a philosopher than the rest of his tribe (the Klickitats), associates the sublime summit of Tahoma with awe, danger and mystery. Your correspondent gives the meaning of 'Tacoma' as 'the mountain.' It is an interesting interpretation, considering the preeminence and grandeur of this noble peak. I have questioned the Indians as to their meaning for the word 'Ta-homa.' The answer of some showed their ignorance of the meaning. Others, with reticence and suspicion peculiar to the savage mind, were stoically non-committal. One interpretation I have heard given is 'nourishing breasts,' the idea presumably being that the eternal snows of the twin summits have given origin to the streams that have occasioned the glacial deposits that have enriched the valleys, thus nourishing and sustaining vegetable life there just as through the ages the maternal breasts have nourished and sustained the youthful human life."

Sluiskin and Henry, mentioned by Mr. Van Trump, were Klickitats, and spoke the Klickitat language. They were of the same race as the guide of Theodore Winthrop, in 1853, and spoke the same name to Van Trump and General Stevens that Winthrop

heard before he first wrote the word " Tacoma." Mr. Van Trump's statement is so clear, forcible and elegantly put that it is most convincing evidence.

Miss Fay Fuller, the first lady to reach the summit of Tacoma, and her father, Edward N. Fuller, Esq., have each made an extended study of the mountain, and they have each adopted the Klickitat word as the real name for the mountain.

" San J. Bautiste (Tabasco), January 19, 1893.

" Mr. James Wickersham, Tacoma, Wash.

" My Esteemed Senor: The contents of your esteemed letter of the 23rd of December were of great interest to me, and well deserve that I should devote to it a special amount of time and study. In order, however, that your worship may not wait for my answer, I hasten with pleasure to put myself to discuss the subject of your letter to put your worship at rest, as far as it is possible for me to do so.

" Being simply a question of a geographical name of Indian origin, your worship has certainly devoted to it much study at this moment.

" The word ' Tacoma,' to which your worship refers, contains a Nahautl or old Mexican construction (element), which is very characteristic. It claims our attention by its being met with so far north and so distant from the territory which is occupied actually by the tribes that are descended from the primitive stock; and to speak the truth, this circumstance would, in the last instance (case), be a new proof (confirmation) of the powerful influence that was once exercised by the people through all the territories over which it ruled, all through which it journeyed, during the long itinerary of its perigrinations.

" Therefore, although the word has been much mutilated in the actual living language, I will, according to the present, expose to your worship my humble opinions as follows:

"(1) The vowel ' a,' in the English idiom in the present case, has a sound which is similar to the ' e ' in the Spanish and of the Nahautl, and by consequence the first syllable of the words which I should analyze would be ' Te,' and the whole word would be ' Tecoma.'

"(2) This modification established, we obtain a word which has in the Nahautl idiom the signification ' friend at first sight,' because as a contraction (apocope) or conjunction of the words ' Tecomatl ' (Vase of Calabaga, according to Rincon in his work Mexican Art, p. 86, Mex. 1885).

"(3) Therefore, it is very probable that in the word 'Tecoma' there are lacking other letters which, when restored, would contribute to give it an acceptable signification; thus, for example, we would decompose it into 'Tecolmna,' which means 'heaps of coal;' and of the verb 'ma,' which means 'to dig' (or raise anything from the earth), which, conjugated gives 'Mar,' and contains the transformations 'Tacoma,' 'Tecoma,' or 'Tecolman,' which, rendered into Spanish, means 'the place from which you get coal.'

"As regards the names 'Tacobet' and 'Tacoma,' which have been given by other tribes to the mountain, I am unable to pronounce a sentence.

"I have devoted myself to the study of indigenous languages of the southern tribes, so could not undertake to analyze words that derive their origin from the living languages of the North, or from any dead languages that have not been mentioned by other historians.

"Here on the spot there are no persons who devote themselves to this kind of investigations to whom I could submit your worship's letter; for this reason I am compelled to expound to your worship with a certain timidity only my own opinion; and I cannot offer the opinions of others who are competent in this matter.

"If in this letter of mine you should meet with anything useful to you in your important study, I am ready to await further letters from you, unless indeed prevented by insuperable obstacles.

"I have the pleasure to send you a copy of my dissertation upon etymological matters; may it please your worship to accept it; while in the meantime I am occupied with the publication of a second corrected and enlarged edition.

"Could you have the kindness to place me in relation with some important philological association or academy.

"May it please your worship to accept my respects, etc., etc.

"Jose N. Rovirosa."

(Translated by Dr. Gundlogson, Feb. 8, 1893.)

*Indian Nomenclature*

Many of the myths and traditions told by our Nesqually-Puyallup people are worthy of Greek or Norse mythology. Their religious feelings are natural, deep and fervent, and their music, art and mechanical skill, while rude, have many points of excellence. Their language is capable of fine distinctions. They bestowed names on every little lake, point, bay and camping ground; they had particular names for places and prominent points, but no general names. Thus "Puyallup" was the name

of the camp ground on the east side of that river below the reservation, but the river had no name; there were as many names for it as they had camping places along its banks. Each of the prominent peaks in both the Cascade and Olympic ranges had names, but neither of the ranges had; they had names for individuals, but none for classes or systems.

The Indian looked with awe and superstition upon the snowy summit of Tacoma. He visited the base, but never ascended above the snow line. The roar of falling waters, the disintegration of its rocky walls, the loud snapping of its glaciers, were to him mysterious, solemn and fearful. Each mat home was filled with stories and traditions concerning it — and yet we are told he had no name for it. Walk, as the writer has, through the forest with a bright Indian, and ask him the names of plants, animals, birds and bugs — everything of common life to him — and you will be surprised at the readiness with which the names follow your questions. I was put to shame at my ignorance of botany by my friend, George Leschi, who, as a boy, followed his father in hostile camps, and who cannot now read or write his name. The Indian language is peculiarly rich in nouns — in names. The Indians had a name for the grand mountain we call Tacoma.

What is the name?

Ask the Indians. Thousands of them yet live in sight of its snowy summit, and are the best witnesses of what the name is. I have asked them, and here are their answers:

"Mud Bay, June 7, 1892.

"We, the undersigned, being Indians born near Mount Tacoma, do say: That the mountain was always called by the Nesqually tribe 'Tacobet.'

"Edward Smith .....age 26 years.
"George Leschi, his (X) mark....age 40 years.
"Charlie Walker, his (X) mark..age 50 years.
"Louis Yowaluch, his (X) mark..age 45 years
"Harry, his (X) mark.....age 50 years.
"James Walker, his (X) mark....age 53 years.
"Jack Simmons, his (X) mark.

"Puyallup Reservation, Oct. 9, 1892.

"We, the undersigned Indians, belonging to the Puyallup Reservation, do say: That the Nesqually-Puyallup name for Mount Tacoma is 'Tacobet.' The Klickitat name is 'Tahoma.' The Indian name for Mount Baker is 'Co-ba,' of Mount Adams is 'Pah-to' and of Mount St. Helens is 'Seuck' or 'Seuq.'

"George Leschi, his (X) mark....age 40 years.
"Bill James, his (X) mark.....age 39 years.
"Jack Simmons, his (X) mark....age 39 years.
"William Bob, his (X) mark.....age 32 years.
"Bill Petowow, his (X) mark....age 49 years.
"George Walker, his (X) mark..age 60 years.
"Yelm Jim, his (X) mark.....age 60 years.

"October 20, 1892.

"We, being Indians raised near Port Orchard Bay and White River, do say that the Indian name for Mount Tacoma was, ever since we could remember, and always before, called 'Tacobet.' The mountain this side of the great mountain cone is called 'te-Wauck.' The Indian name for Mount Baker is 'Coba.' The Olympic mountains are called 'Tu-ad-och Spadit.'

"Jack Simmons, his (X) mark, age 39 years.
"Thos. Simmons, his (X) mark, age 60 years."

"Tacoma, Wash., Jan. 30, 1893.

"James Wickersham, Tacoma, Wash.

"Dear Sir: The common Puyallup Indian name for the great mountain is 'Takoman' or 'Takoban' and also called by the Klickitats 'Tachoma.' It is also sometimes referred to as 'Tuwouk,' the head of the Puyallup River.

"Respectfully yours,
"P. C. Stanup."

"Seattle, Wash., Jan. 25, 1893.

"I, Angeline, the daughter of Seattle, do say that the old Indian name for the great mountain at the head of the Nesqually is 'Tacobet,' and that my father, Seattle, always called it by that name.

"Angeline, her (X) mark,
"Daughter of Seattle."

"On this 25th day of January, at Seattle, Wash., Angeline, the daughter of Chief Seattle, signed the above paper with her mark, after it was explained to her. She said that God named the mountain 'Tacobet,' and only He could change it.

"(Signed) Jack Simmons, his (X) mark."

"Puyallup Reservation, Jan. 30, 1893.

"We, the undersigned, who talk the Puyallup-Nesqually language, do say that the old Indian name for the mountain is 'Tacobet,' and always was so before the whites came.

| | |
|---|---|
| "Martha (X) Bill | "Lucy (X) Simmons |
| "Janimy (X) Bill | "Texas (X) Bill |
| "Cour (X) Simmons | "Mary (X) Stillwell |
| "Mary (X) Simmons | "George (X) Bird |
| "Charlie (X) Jackson | "Mrs. (X) Stillwell |
| "Sally (X) Jackson | "Bill (X) Meanna |
| "Major (X) Hamilton | "Mrs. (X) Meanna |
| "Ellen (X) Howard | "Sally (X) Meanna |
| "Jean (X) Garrison | "Mrs. (X) Old Jack |
| "James (X) Riley | "Chehalis (X) Bill |
| "Bill (X) James | "Betsy (X) Bill |

"Alice (X) James."

"We, the undersigned, Klickitat and Yakima Indians, now living on the Yakima Reservation, say that the old Indian name for Mount Tacoma is, and always was 'Ta-ho-ma.'

"Wilbur Spencer,
"Abraham Lincoln,
"Charles Wannassay."

"I certify that the above Indians signed the above paper after thoroughly understanding it.

"Jay Lynch, United States Indian Agent."

(Dated at Fort Simcoe, Wash., January 29, 1893.)

"United States Indian Service, Yakima Agency,
"Fort Simcoe, January 29, 1893.

"Hon. James Wickersham, Tacoma, Wash.

"Dear Sir: According to promise, I send you statement from Indians in regard to Indian name for Mount Tacoma or Rainier.

"I have talked with several old Indians in regard to this matter, and they say that the Indian name is, and always was, 'Ta-ho-ma.' Wilbur Spencer, son of old Chief Spencer, and the best interpreter, and an educated Indian, says the meaning of the word is 'rumbling noise or sound.'

"The Indian name for Mount Adams is 'Pat-too,' meaning high, sloping mountains.

"The Indian name for Mount St. Helens is 'Lah-me-lat-clah,' meaning 'fire mountain.'

"Very respectfully yours,
"Jay Lynch,
"United States Indian Agent."

"We, the undersigned, being Indians who talk the Klickitat-Yakima language, do hereby say that the Klickitat-Yakima name for the great mountain, at the head of the Nesqually river, is 'Tach-oma,' and that was the old Indian name for the mountain before the white men came to the country.

"George Leschi, his (X) mark,
"Son of Quiemuth
"Mrs. Napoleon, her (X) mark,
"Daughter of Leschi
"William Charley
"Mrs. Jennie Charley
"Blind Bob
"Burnt Charley
"Mrs. Burnt Charley
"William Penio
"Mrs. Napoleon,
"Daughter of Chief Kitsap
"Harry Taylor
"Mrs. Louise Taylor
"Henry Taylor
"Paul Wynaco
"Mrs. Yelm Jim
"Mrs. James Riley
"James Riley."

*The Exact Word — "Tacoma"*

In August, 1853, Theodore Winthrop journeyed from Port Townsend to Squally in a royal canoe of Clallamdom, paddled by the Duke of York and other aristocratically named retainers. At Nesqually he outfitted for a ride to The Dalles, Ore., via the Natchez pass, and was furnished as a guide a young Klickitat brave, the son of Owhi, whose annual journey to Squally from the Yakima meadows made it a familiar trail to him. Across the flower-carpeted plains from Nesqually rode Winthrop, the poet, and Owhi's son; into the dark recesses of the Puyallup forest, wading the unbridged waters of Skamish, over logs, up Alpine heights — but always in the shadow of the great white mountain, so full of mystery to the guide.

The white man was a poet — sensitive, cultured and refined; the Indian, nature's child, superstitious and imaginative; and as they journeyed into this vast solitude, these poetical natures were drawn into close relationship. From Loolowcan, the Klickitat, the son of Owhi, Winthrop heard the name of "Tachoma," and to the fortunate choice of this guide we are indebted for the exact

word "Tacoma," as it appears in Winthrop's book, "Entered according to Act of Congress in the year 1862," but written nine years previously.

A few quotations from the first author to use the exact word, "Tacoma," will be peculiarly appropriate at this time, as they bear directly on the subject under discussion. Concerning his journey from Port Townsend to Squally, he writes, on page 43, "Canoe and Saddle:"

"We had rounded a point, and entered Puyallup Bay, a breadth of sheltered calmness, when I, lifting sleepy eyelids for a dreamy stare about, was suddenly aware of a vast white shadow in the water. What cloud, piled massive on the horizon, could cast an image so sharp in outline, so full of vigorous detail of surface? No cloud, as my stare, no longer dreamy, presently discovered — no cloud, but a cloud compeller.

"It was a giant mountain dome of snow, swelling and seeming to fill the aerial spheres as its image displaced the blue deep of tranquil water. Kingly and alone stood this majesty, without any visible comrade or consort, though far to the north and south its brethren and sisters dominated their realms, each in isolated sovereignty, rising above the pine-darkened sierra of the Cascade mountains, above the stern chasm where the Columbia, Achilles of rivers, sweeps, short-lived and jubilant, to the sea; above the lovely vales of the Willamette and Umpqua. Of all the peaks from California to Fraser river, this one before me was royalist. 'Mount Regnier,' Christians have dubbed it in stupid nomenclature, perpetuating the name of somebody or nobody. More melodiously the Siwashes call it 'Tacoma,' a generic name, also applied to all snow peaks.

"Farthest away in the west, as near the western sea as mountains can stand, are the Cascades. Sailors can descry a land-mark summit, firmer than clouds, a hundred miles away. Kulshan, named Mount Baker by the vulgar, is their northernmost buttress up to 49 degrees and Fraser river. Kulshan is an irregular, massive, round-shaped peak, worthy to stand a white emblem of perpetual peace between us and our brother Britons.

"Its name I got from the Lummi tribe at its base, after I had dipped in their pot at a boiled salmon feast. As to 'Baker,' that name should be forgotten. Mountains should not be insulted by being named after undistinguished bipeds nor by the prefix 'Mount.' 'Mount Chimborazo' seems as feeble as 'Mr. Julius Caesar.'"

By far the greatest number of authorities give the meaning of the word "nourishing breast," while the Yakimas say it means a "rumbling noise." Another version is that it means "the gods."

My own impression is that it has reference only to the fact of its being a high, snow-covered peak; but I cannot refrain from making these few observations:

Tak't, a Nesqually word, means "inland" or "away from water." "Ta" is a Nesqually-Puyallup root, and is the base of "this," "that" and "what." Which of these Indian words is a part of the word "Tacoma" I do not know. The word "ko" means water, in the Nesqually-Puyallup, as well as in many other Indian languages. The word "ko-ma-chin" or "ko-bat-chid" in Nesqually-Puyallup means "rainbow," while the word "ma-ko" means "snow." Here we find the syllables "ko" and "ma" having reference to water, rainbow and snow, and it seems but little trouble from this very imperfect analysis to determine that the word "Tacoma" is only plain Indian for "snow-covered mountain."

*Conclusions*

(1) The Puget Sound Indian name for the mountain is "Ta-co-bet," the "b," in Indian, is interchangeable with "m," and hence we also find the word used as "Ta-co-man" and "Ta-co-ban."

(2) The Yakima-Klickitat name is "Ta-cho-ma," with the "ch" as in German, but most frequently written as "Ta-ho-ma."

(3) The name means "snow-covered mountain."

(4) The word "Tacoma" is a fair, honest Indian noun.

(5) The word "Tacoma" should be preserved as the name of this royal mountain peak, and "Mount Rainier" should be abandoned.

The special attention of the people of Puget Sound is called to the fact that the reservation made by the President is only a forest reserve. It is not a park, nor is it yet set apart for the public at all. It is a simple withdrawal of that much of the public domain from disposal under the public land laws, and is not intended in any manner for the use of the public. The President has no power to improve it, or to permit others to do so, and each of our citizens going upon the reserve simply becomes a trespasser. It is not open to the public, but by the act of withdrawal it is beyond the power of any citizen to acquire either temporary or permanent rights thereon, except by an act of Congress.

What we now want is an act of Congress specially setting this apart as a park, donating it to the State of Washington, and providing for its care and custody by the state for the benefit of the public.

JAMES WICKERSHAM.

Dated February 6, 1893.

## NATIONAL FORESTS

### Alabama National Forest Created

In our last Annual Report (1917), at page 380, we gave a summary of the area of the National Forests of the United States, showing that they then comprised 155,860,202 acres.

In January, 1918, President Wilson signed a proclamation creating a new forest reserve called the Alabama National Forest. It includes about 10,500 acres of public lands in Lawrence and Winston counties, in the northern part of the State of Alabama, which had been withdrawn from entry. In addition the Government has purchased approximately 12,000 acres and has options on an additional 13,000 acres in the same locality. It is expected that, by further purchases, the forest will eventually be enlarged to include about 150,000 acres. Much of the land in question was formerly entered under the homestead laws and abandoned because the settlers were unable to make a living. Good timber is produced, however. The area is on the headwaters of the Sipsey river, an important tributary of the Warrior river, where the Government is building an extensive system of locks and dams. For this reason officials of the Forest Service say it is particularly important that the forests on the headwaters of the river be protected against forest fires and indiscriminate cutting. If the timber is cut clean the light sandy soil on the steep slopes is washed down into the river where it forms sand bars and prevents navigation.

The inclusion of the land in the National Forest does not mean that it ceases to produce revenue to the local counties. As in other National Forests, mature timber that can safely be cut will be sold, and a small charge made for stock grazing and other uses of the land. By law, 25 per cent. of the gross receipts of the National Forests is returned to the road and school fund of the States in which they are located. An additional 10 per cent. is spent by the Forest Service in building roads and trails. Tentative applications have already been received for the purchase of five or six million feet of timber and for the grazing of several hundred head of cattle.

The Alabama National Forest is in charge of Mr. W. R. Barbour, with headquarters at Moulton, Ala.

### Additions to Eastern National Forests

On December 12, 1917, the National Forest Reservation Commission authorized the purchase of 65,923 acres of land in the Southern Appalachians and White Mountains for inclusion in the Eastern National Forests. A resolution was adopted refusing to make further purchases in Georgia until after the repeal of hostile legislation passed by the State Legislature last summer. About 27,800 acres on the Savannah and Georgia Purchase Areas, which were recommended to the Commission, will be held up by this resolution. The Commission also refused to approve the purchase of a tract on the Unaka Area in Tennessee, for which a higher price than that agreed to by the owner was awarded by the jury in condemnation proceedings brought with the owner's consent to clear the title.

The largest single holding whose acquisition was authorized is one of 35,079 acres on the Shenandoah National Forest, in Bath, Augusta and Highland counties, Virginia, for which $2.50 per acre will be paid. In Winston and Lawrence counties, Alabama, a number of small tracts, aggregating 13,435 acres were approved. Other lands ordered purchased include 1,430 acres in Carroll and Grafton counties, New Hampshire; 7,250 acres in Amherst county, Virginia; 6,801 acres in Buncombe, Mitchell, Yancey, McDowell and Macon counties, North Carolina, and 1,428 acres in Tucker and Randolph counties, West Virginia.

The greater part of the land approved in Amherst County, Virginia, on the Natural Bridge National Forest, is owned by the city of Lynchburg and comprises the watershed from which the city derives its municipal water supply. A condition of the sale to the Government is that this tract and adjoining lands shall be administered and protected so that the purity of the water supply will not be endangered. No restriction, however, is placed on full utilization of the resources of the tract.

### National Forest Timber Sales Doubled

Sales of National Forest timber in the fiscal year 1917 were more than double those of 1916, according to the Annual Report of the Forester. The total amount sold exceeded 2,000,000,000 feet and is valued at more than $3,715,000. During the same

period about 727,000,000 feet were cut and removed, for which the purchasers paid $1,507,303 into the Federal Treasury. The largest sales were made in Oregon, where about 688,000,000 board feet were disposed of.

In addition to the timber sold, approximately 113,000,000 board feet, valued at almost $150,000, was cut under free use permit by more than 41,000 settlers living near the National Forests and depending on the forests for firewood and building material to improve their homesteads.

The timber business on the eastern purchase areas, while still small as compared with the western forests, showed a decided increase, the report states. More than three times as much timber was sold and more than twice as much cut as in 1916. The material disposed of, it is pointed out, is largely of poor quality and its removal will improve the forest growth.

### Grazing in the National Forests

A continued increase in the demand for permits to graze livestock on the National Forests and the necessity of going ahead with the work of developing the forest ranges to the utmost are emphasized by Acting Forester A. F. Potter in the last annual report of the Forest Service. The settlement of the public domain brings new applicants for grazing privileges with each succeeding season, while the continued high prices received for meat, wool and hides are an incentive for the older permittees to endeavor to increase their numbers. "New permits for an increased number of animals and an advance in the grazing fees made during the year brought the total receipts from grazing up to $1,549,000."

The winter season of 1916–17 was the most disastrous the range stockmen of the West have known, Mr. Potter states. There have been years when the local losses were heavier, but never when the losses were so general in every range State. As a result of continued severe weather throughout the winter months and a scarcity of hay, which was hard to get at any price, stockmen suffered severe losses. The lamb crop for the entire West was probably 15 to 20 per cent. below the average, while the calf crop was considerably below normal. Because of the shortage of feed on the open range, the National Forests were opened to grazing in

advance of the regular season and several hundred thousand sheep and cattle were admitted to the Forest ranges.

The number of cattle on the forests the season of 1917 was nearly 200,000 greater than in 1916, and the number of sheep more than 200,000 greater. This increase, it is stated, was due to a more intimate knowledge of the forage growth and the carrying capacity of the ranges, and to efforts made to increase production of livestock to meet the emergency food needs of the country.

About 1,100,000 acres were examined by the grazing experts of the service during the year 1917. The information gained will, the report says, aid in raising the number of livestock on the ranges to the maximum, without excessive damage. Light grazing for three years has resulted in excellent recuperation of a large area of grass range on the Jornada Range Reserve. On the high mountain lands of the Manti National Forest in Utah, it was found that erosion and decrease in soil fertility following overgrazing materially lengthen the period necessary for the grass to "come back."

A study of the methods of herding goats has resulted in an improvement in the handling of those animals on the range. On the Jornada Range Reserve a calf crop fully 10 per cent. above the average was saved from a breeding herd held on a fenced range under improved methods and given a small amount of supplemental food. From another herd, fed an average of 50 pounds of cottonseed cake per head and given still better care, the calf crop exceeded the average by more than 20 per cent.

On some of the Utah, Montana and California forests tests were made which further demonstrated the advantages of the "bedding out" system of handling sheep over the old method of close herding with dogs. Advance was made in the methods of salting cattle and in showing the value of well distributed watering places. On a number of forests demonstration tests were made of eradication of the poisonous tall larkspur. In every case, the report states, the losses from poisoning were reduced to an extent which more than justified the cost. Minor investigations were also started to work out methods of getting rid of other poisonous plants.

In January, 1918, the Secretary of Agriculture notified all holders of permits for grazing livestock on the National Forests that the payment of any bonus or allowance for waiver of the

grazing privileges in connection with sales of livestock or ranch properties would be cause for revocation of the permit.

This is in accordance with one of the regulations governing the use of the National Forests for grazing privileges, which provides that permits will be granted only for the exclusive use and benefit of the owners of the stock and will be forfeited if sold or transferred in any manner or for any consideration. To protect permittees who may wish to dispose of their property against the losses which sacrifice sales would involve, it has been customary to allow continued use of the National Forest ranges by the new owner. Without some provision for this, the Forest Service grazing officials point out, holders of permits who wish to go out of business would not be able to obtain a fair value for their property. But the procedure has aimed throughout at such a safeguarding of the situation as would prevent the acquisition of anything approaching vested rights in the public property by private individuals or companies.

Owing to the great and ever-growing demand for use of the forest ranges, which is now in most regions far beyond their capacity, the grazing privilege is of large value. Upon the National Forests the Government applies a system of regulated use designed to encourage production, promote the upbuilding of the country along healthy lines, and secure the greatest good to the greatest number, but makes only a moderate charge for the grazing permits.

In the view of those in charge of the National Forest grazing business, it would be entirely unfair for the public to forego a maximum return for the value of use of its property and then allow those granted the privilege of use to collect this value from others, as the price of surrendering their privileges. Such a practice would, they say, make competitive disposal by the Government of the grazing the only logical course.

Secretary Houston, says, in warning the range users that the payment of bonuses or the giving of any consideration to secure the filing of a waiver of the grazing privilege is prohibited, " such a payment would be a consideration for a privilege the granting of which is wholly within the discretion of the Government and for which no one is entitled to receive compensation." Therefore

any such payment will be "sufficient cause for the revocation of permit or forfeiture of all grazing preferences based upon the purchase of permitted stock."

### Fires in the National Forests

Forest fires burned over 962,000 acres of National Forest lands in 1917 and caused a loss of $1,358,600 to the Government in timber, forage and young growth, according to figures compiled by the Forest Service. While the loss was larger than for several years past, officials say that, considering the unusually dangerous conditions, it was remarkably light. Protracted drouth and periods of high winds made the conditions virtually the same as in 1910, when many persons were burned to death and $25,000,000 worth of timber on the National Forests were destroyed.

In addition to the actual loss in timber and forage, the fires of last year entailed extra expenditures by the Government of $1,121,451. This, it is pointed out, means that to hold the fires down large numbers of men have to be withdrawn from productive work and much money spent for supplies. At a time like the present when it is necessary to practice the utmost economy as a war duty, the Forest Service officials are emphasizing the criminal wastefulness of forest fires that can be prevented from starting.

Of the 7,814 fires which were fought on the National Forests, all but 2,132 set by lightning were caused by human agencies and could have been prevented. There were 952 incendiary fires, which occurred for the most part in Oregon, California and Arkansas. Careless campers were responsible for 1,288. Railroads, partly through failure to comply with the law and use proper spark arresters, set 1,003. The remainder were caused by various forms of carelessness on the part of settlers and other users of the National Forests.

Effort is being made by the Forest Service to impress upon the public the necessity of keeping fire out of the woods, especially now that the country needs its man-power so badly for other purposes than fighting unnecessary fires. The campaign of education against carelessness and indifference which has been waged for years, through fire-warnings, posters, talks and lectures, "movies," and in other ways, will therefore be pressed with renewed energy the coming season.

### Substitution of Other Materials for Wood

Twenty-five years ago lumber was regarded as almost as much of a necessity as wheat, while to-day it is steadily being replaced by various substitutes, says a report by the Forest Service on "The Substitution of Other Materials for Wood," issued in October, 1917. Disregarding the temporary effect of the war, with its sudden demand for lumber and its great enhancement of prices of many substitute materials, the report points out the tendency in the long run. Each year more steel, concrete, brick or tile is being used in places where lumber was formerly employed. This is particularly true in cities where enactment of building codes and the development of new forms of construction have created a demand for more durable building material. Shingles have given way largely to composition and tile roofings, wooden sidewalks have been almost wholly replaced by cement, while the modern skyscraper with its steel framework, and stone, brick or tile walls occupies the site of some former frame structure. Railroad crossties and mine props are about the only forms of wood which are not affected.

How seriously this substitution has affected the lumber business is shown by the Government estimate that the total replacement of lumber in all forms of use is 8,090,000,000 board feet, or 21 per cent. of the lumber consumption of the United States in 1915. The rate of substitution seems to be increasing and is now in excess of 500,000,000 board feet a year. Approximately 70 per cent. of the lumber cut goes into forms of use whose demands appear to be decreasing. Twenty per cent. more goes into strongly competitive fields. In the remaining 10 per cent. of wood uses, there seems to be a much better opportunity for a larger consumption.

Increasing substitution has not, however, lowered lumber prices to the consumer, the report points out. On the contrary, they have steadily advanced, while the cost of many substitutes has decreased. Exhaustion of the stands of local timber and discovery of new sources for the manufacture of other building materials are given as some of the reasons for these changes. More than 75 per cent. of the replacement of wood, however, is made in spite of higher initial cost of the substitute.

The effect of the growing use of other materials has been to accentuate competition and decrease profits in the lumber business. As a result of this and other reasons, alternate periods of curtailment and over-production have made the lumber market unstable. This in turn has resulted to the disadvantage not only of the persons whose money is invested in timber and sawmills, but to the many hundred thousands who are dependent upon the lumber industry for their living.

Lumbermen have felt, it is said, the effect of the replacement of their product by other materials, but have not realized the extent to which it had taken place. They have failed to adopt aggressive selling methods and have been unable to supply the consumer with reliable information regarding lumber, because they did not have it. A complicated system of grades is in use which is not intelligible to the average consumer and is even the subject of considerable dispute among lumbermen.

Manufacturers of other building material have spent large sums of money to obtain reliable information about their products. They have had to advertise extensively to make a "place in the sun" for themselves. Substitutes for lumber are guaranteed to meet specifications which are easily understood by the consumer. These facts, the report states, have combined to make the substitutes increasingly popular.

For lumbermen to hold their markets against competing materials, it will be necessary for them to learn more about the fundamental properties of wood, the author of the report says. They can do this either by scientific research for themselves or by co-operating with agencies already established. Better manufacturing and selling methods, and the development of by-products should enable them to make a profit in spite of the limitations on the prices of lumber which may be imported by competing substitutes.

Even with the increasing substitution for wood, the report points out, there will be need for all the wood in the United States and more. The total consumption of the country for many years has been far in excess of the growth. Already in many regions timber shortage and high prices have followed the exhaustion of the local supply. From the public standpoint there is a real need for growing forests vastly larger than are now planned for.

### Increased Uses for Wood

But if, as indicated under the preceding heading, the use of substitutes for wood is increasing, it fails to offset the increasing use of wood itself, as shown by studies made by investigators of the United States Forest Service during 1917.

At the Forest Products Laboratory of the service, study and experimentation on a wide range of projects were conducted. Investigation of the best methods of preservative treatment for wood-block pavements was continued. Several factories and insurance companies co-operated in the development of preservatives to prevent decay of structural timber used in cotton mills. Furniture, lumber and woodenware manufacturers and railroads were given advice regarding dry kilns and methods of kiln drying. Commercial demonstrations of roofing and various paper products from hemlock bark were made. It was shown that by the use of an improved process developed at the Laboratory, operating expenses in the production of ethyl or grain alcohol from wood waste can be reduced by $300 per day.

Approximately 10,000 additional tests of mechanical properties of various species of wood were made during the year, which brings the total number of tests of the character up to about 130,000. Among other things the data obtained make possible scientific grading rules for structural timber such as those already perfected for southern pine and under development for Douglas fir and hemlock.

Prior to the beginning of the war tests on methods of kiln drying lumber were continued as in the past. A process was perfected under which hemlock shiplap can be dried to shipping condition with practically no loss of grade in forty to forty-eight hours. Satisfactory results were also obtained with Douglas fir and white fir. The time for drying maple shoelast blocks was reduced from twenty-one to two months and losses were reduced from 15 to 6 per cent. Work was largely completed on spruce and ash for airplane material, the problem being to dry the material in the minimum time without loss of strength and toughness, as compared with air-dried stock.

At least 50 per cent. of the commercial wood distillation plants, according to the report, are attempting to use the method of con-

trolled distillation developed by the Forest Products Laboratory. Experiments indicate that the yield of naval stores can be increased by 30 per cent. or more the first year by cutting two narrow streaks, rather than one broad streak per week, as is commonly done in commercial practice, and that the net returns can be increased by about $450 per crop.

Further study of the utilization of various waste barks, for the manufacture of pulp and paper products, were made on eight species. Tests under the soda process of making paper were continued for thirteen species, while under the sulphate process eighteen species were tested and a good quality of kraft pulp suitable for a high grade wrapping paper was obtained from each.

While the principal activity of the Office of Industrial Investigations was on war problems, other lines of work were carried on as well. In co-operation with the National Lumber Manufacturers' Association, data on the lumber production of 1916 were collected and a report issued. The production of lumber was estimated at approximately 40,000,000,000 board feet from over 30,000 sawmills. For the first time since 1911 statistics were compiled and a report issued on the lumber of crossties and poles purchased in the United States. Data were collected in co-operation with the American Wood Preserving Association, showing the quantity of preservatives used and the amount of wood treated in the United States in 1915. Statistics compiled in co-operation with the Newsprint Manufacturing Association showed that in 1916 the 230 pulp-making plants reporting used 5,228,558 cords of pulpwood, or 17 per cent. more than in 1914, the last year for which figures had been obtained.

The increased activities of woodlot owners, lumbermen and wood-using establishments, their interest in markets and the care and preparation of material and their efforts at closer utilization were, the report states, reflected in the increased number of requests for information from all parts of the United States.

### Lumber Census to be Taken

The Forest Service of the United States Department of Agriculture announced in January, 1918, that a census of the lumber production of the country during 1917 is to be made by the Forest Service in co-operation with the National Lumber Manufacturers'

Association, as in past years. Questionnaires have already been mailed to the 30,000 sawmills throughout the country asking that the amount of each kind of lumber cut be reported promptly.

It is pointed out by officials of the Forest Service that the lumber census is of particular importance at this time, because of the large quantities of special material needed for the conduct of the war. Several of the Government Departments, they say, depend upon the Forest Service for data and technical advice on subjects connected with lumber. Since the entry of the United States into the war, this demand has been greatly increased. In many cases the information gathered by the Forest Service in previous years has made it possible to determine at once where certain classes of material could be obtained in the largest quantities and consequently has enabled the Government to get in direct touch with the proper mills without loss of time.

Because of unsettled conditions in the lumber trade in 1917, it has been somewhat difficult to judge the current production. Heavy calls for lumber made by the Government have been partially offset by transportation difficulties and scarcity of labor. Officials say that it will require a careful census to determine whether the output was more or less than preceding years. They point out at the same time that the lumber manufacturers can aid the work materially by filling out and returning promptly the questionnaires that have been sent them.

### United States Forest Service and the War

How the work of the Forest Service was realigned to meet war conditions is described in the Annual Report of the Forester for 1917, which in the absence of the head of the Service is made by Acting Forester A. F. Potter. The report also states that practically every form of use of the forests was greater than ever before, that the receipts again touched a new high level with a total of $3,457,028.41, and that the increase in receipts over the previous year was $633,487.70.

"When the grazing charge has been advanced to cover the full value of the grazing privilege," says the report, "the income from the National Forests will be close to the cost of operation. The present annual cost is about $4,000,000." An increase equal to that of the last fiscal year "would close the gap."

The Forester, Henry S. Graves, is now serving with the American Expeditionary Forces in France, with a commission as Lieutenant-Colonel, in connection with the forest work for the supply of the needs of our overseas troops and those of the allies. A number of other members of the Forest Service received commissions in the Tenth Engineers (Forest) while many more entered the ranks.

"Upon the rupture of diplomatic relations with Germany," says the report, "the Forest Service began to plan for meeting the responsibilities which, if war followed, it should assume." Among these were emergency assistance in the protection of public works and transportation lines and the gathering of military reconnoisance information valuable to the War Department.

Wood and other forest products have almost innumerable uses in modern warfare, it is pointed out. Never before has the demand for exact knowledge been so urgent. "In the work relating to forest utilization and forest products, the resources of the Service have been employed to the limit of their capacity since the war began in rendering assistance to the War and Navy Departments, the Emergency Fleet corporation, various committees of the Council of National Defense, and manufacturers of war orders. The peace-time program has been largely discontinued. The force and the work have been centered in Washington and Madison. Every effort has been made to bring available knowledge to the attention of the organizations which have need for it and to assist in anticipating their problems."

Much of the work has concerned aircraft material. It has included also problems connected with the construction of wooden ships and of vehicles. Assistance has been given to hardwood distillation plants in order to increase the production of acetone and other products needed for munition making. A commercial demonstration has shown that costs of producing ethyl alcohol from wood waste can be materially reduced. Methods have been developed by which walnut and birch can be kiln-dried in a much reduced time with comparatively little loss. In general, the report says, "much assistance has been given on a great variety of war problems relating to forest resources and the manufacture, purchase and most efficient use of wood and other forest products."

In spite of the many new demands upon the Service and the entrance upon military duties of a considerable number of its men, the administrative and protective work on the National Forests was continued without disorganization. "Upon request of the War Department the preliminaries of recruiting and officering the Tenth Engineers (Forest) were handled. Increase of crop production in and near the Forests was stimulated and the forage resources of the forests was made available for emergency use up to the limit of safety. In the latter part of the summer a fire season of extreme danger, made worse in some localities by an unusual prevalence of incendiarism, was passed through with relatively small loss of property and with no reported loss of life."

In January, 1918, the United States Forest Service announced that 6,000 additional men were wanted at once to bring the Twentieth Engineers (Forest) regiment up to full strength. This is the second forest regiment formed by the War Department and will be the biggest regiment in the world.

The first forest regiment went to France in 1917, and has been busy in cutting and getting out of the French forests timber, lumber, and other material for our army. Some battalions of the Twentieth have also gone across, and others will follow as their equipment and preliminary training are completed. Men who enter this unit are therefore assured, the officials say, of early service abroad.

Men can join the regiment by enlistment if not of draft age and if within the age limits, which are from 18 to 40. Registrants under the selective draft law who have not been notified to hold themselves in readiness to report for duty at a camp can be "inducted" into the regiment if they can show that they are qualified for it.

Three thousand of the men being secured consist of lumberjacks, sawmill workers, and men experienced in building and operating logging railroads. The other three thousand are taken to make up three road and bridge-building battalions which will serve as auxiliary to the logging and sawmill units. For these road-building battalions, men who are familiar with the operation of rock crushers, road rollers, scrapers and graders, motor truck drivers, and laborers experienced in road work are required.

The lumbering and sawmill battalions will be made up of men skilled in every phase of manufacturing and delivering lumber and other forest products needed in the conduct of the war. Sawyers, teamsters, axemen, tie makers, cooks, and charcoal burners are some of the classes wanted for the woods operations. Graders, track layers, track bosses, locomotive engineers and firemen, brakemen, machinists and laborers are needed to construct and operate logging railroads. Men skilled in all kinds of work around sawmills, including filers, stationary engineers, boiler makers, truck and tractor operators and laborers for lumber yards are required.

### National Forest Notes

Nearly half a million people use the Pike National Forest, in Colorado, each year for recreation.

The total amount of timber cut on the National Forests in the fiscal year 1917 was 840,612,000 board feet, as against 714,505,000 board feet in 1916.

Studies at the Forest Products Laboratory, at Madison, Wis., have shown that Engelmann spruce treated by the sulphite process gives a pulp that compares very favorably in color and strength with that of white spruce.

About 200 board feet of wood is used in the actual construction of the average airplane. To obtain this material it is ordinarily necessary to work over about 1,500 feet of select lumber, which often represents all that can be used for airplanes of 15,000 board feet of standing timber.

According to one of the German forestry journals, the Kaiser, in 1908, killed 1,995 pieces of wild game, including 70 stags, elk and roebuck. At that time he had slaughtered a total of 61,730 pieces of game, more than 4,000 of which were stags, and was the leading exterminator of wild life in the world. As a slaughterer of men, women and children since 1914, however, he has been the foremost exterminator of human life in all history.

## FORESTS AND PAPER PRODUCTION

In our last Annual Report we referred at some length to the effect which the poor quality of newspaper and bookpaper being purchased under current conditions would have on the permanence of historical records, and in continuation of the subject we note some of the developments of the situation during the past year.

On June 13, 1917, the Federal Trade Commission submitted to the United States Senate a report recommending the pooling of all paper and paper-pulp in the hands of a Federal agency for distribution on the basis of cost plus a fair profit. This commission was appointed pursuant to Senate resolution No. 177, Sixty-fourth Congress, adopted April 24, 1916. It made a preliminary report on March 3, 1917, and its complete report on June 13.

As a result of the work of the commission, six prominent manufacturers of newspaper were indicted for violation of the Sherman anti-trust law, charged with conspiring to keep up the price of paper. On November 26, 1917, an agreement was reached between the Department of Justice and the paper manufacturers by which the Government fixed a price for newsprint until three months after the close of the war, on the condition that the Newsprint Manufacturers' Association should dissolve. At the same time five of the six paper manufacturers who were indicted for violation of the Sherman anti-trust law pleaded *nolo contendere* and paid small fines, action on indictment against the sixth being deferred because he was doing Red Cross work in France and his attorney had no authority to enter a plea for him. The names of the defendants in these suits may be found in the New York *Times* of December 13, 1917.

The Newsprint Manufacturers' Association dissolved on December 12, 1917.

Some of the statistics given in the report of the Federal Trade Commission in its report to the Senate on June 13, 1917, are of much interest. The consumption of newsprint paper in the United States in 1916 amounted to 1,775,000 net tons, valued at more than $70,000,000. The report also states:

"There were in 1916 approximately forty companies operating seventy mills, the bulk of whose output was book paper and a number of other mills which manufactured some book paper in

addition to the various other grades. The output of the principal book paper mills in 1916 probably aggregated more than 1,000,000 tons, valued at more than $87,000,000.

"During 1916 the prices of different grades of book paper showed large increases over those for the preceding year. Contracts made by twenty-three manufacturers in the last half of 1916 on the average were 84 per cent higher for machine finish, 66 per cent higher for supercalendered, and 65 per cent higher for coated book than in 1915. The percentage of increase in current prices, except on coated paper for sales to publishers in several large centers, were even higher.

"The average cost of manufacture of forty-one principal book paper mills for the year 1916 was $7.79 per ton higher than for 1915, the increase in particular mills ranging from less than $2 per ton in several cases to more than $20 per ton in the most extreme cases. Costs were rising throughout the year, however, so that for the first quarter of 1917 they were very much higher on the average than for the year 1916. In general, the increase in cost was greater for the mills purchasing their pulp than for those producing it.

"The average profits per ton of forty-one principal book paper mills were 100 per cent higher in 1916 than for the preceding year. In some mills there was no increase in profits, while in others the increase was very large, the relation of profits for the two years depending upon the proportion of the total output of each mill sold under the old contracts at normal prices. The profits for the first quarter of 1917 were generally much higher than for 1916.

"The margins of profit of paper jobbers on book paper sales were generally much larger in 1916 than in 1915. The average increase on current sales of machine finish book paper for the principal New York jobbers was 200 per cent, and Boston jobbers 343 per cent.

"The domestic production of book paper was nearly 20 per cent greater in 1916 than in 1915, but domestic consumption and exports increased so rapidly that stocks declined. Imports, which have never been large enough to be a factor, are now practically nothing.

"The volume of advertising and the circulation of the principal publications of the country using book paper showed a large increase in 1916 over 1915.

"Twenty-three important book paper companies, produce from 75 to 80 per cent of the total domestic output of book paper."

## JAPANESE CHERRY TREES IN AMERICA

In response to an inquiry from Manabu Miyoshi, Sc. D., of the Botanical Institute of the Imperial University at Tokio, Japan, we have been happy to inform him that the Japanese cherry trees which were presented a few years ago to the city of Washington, D. C., by the Mayor of Tokio and which were planted around the Tidal Basin in Potomac Park are in a very flourishing condition. They bloom luxuriantly in the spring and not over one per cent. of the total number presented have been lost. The trees are from 8 to 12 feet high and in April, 1918, were blooming luxuriantly.

In New York City there are four main plantations of Japanese cherry trees: One west of Riverside Drive and 145th Street, one east of Grant's Tomb, one on Riverside Drive south of the Soldiers and Sailors' Monument, and a more or less disconnected plantation around Conservatory Lake in Central Park. These trees are flourishing uniformly at all these locations. They seem peculiarly adapted to conditions in the city, and have done equally as well along the drive where they are subjected to many adverse conditions due to high winds and the dust-laden atmosphere which is prevalent here on account of the amount of traffic. In the spring of 1918, however, they did not bloom as profusely as in previous years, possibly on account of the excessive cold of the preceding winter; and the terminal shoots on a number of trees showed considerable winter killing. Mr. J. S. Kaplan, the Forester of the parks, adds:

"There has been discovered on these trees a disease which causes the leaves to curl up soon after they develop in the spring. This is particularly in evidence on those trees which we have moved to some of the downtown parks, and which we use as specimen shrubs in these locations. The recommended treatment for such affected trees is to immediately remove and burn them. This has been done within the last two years and I am advised by the Bureau of Plant Industry of Washington, that the spread of this disease is so slow that such means will effectively hold them in check. However, the trees generally seem to be particularly adapted to this climate and they are flourishing."

## THE GEORGE WASHINGTON CHERRY TREE STORY

An unsubstantiated statement that the origin of the famous cherry tree story about George Washington had been found was made public under a Penn Yan, N. Y., date in the Rochester *Democrat and Chronicle* on February 22, 1918.

For the benefit of the foreign readers of this Report, it may be stated that the tradition is to the effect that when a boy Washington cut down a cherry tree, and when accused of the deed he replied, in effect: "Father, I cannot tell a lie; I did it with my little hatchet." The hatchet, therefore, has long been regarded as a humorous symbol of Washington's truthfulness.

The alleged discovery of the origin of the legend was printed in the Rochester paper under the heading "George Washington Sawed Plum Tree; Did Not Chop Cherry Tree, According to Amazing Document." The article in full reads as follows:

Penn Yan, Feb. 21.— That destroying a plum tree with a saw and not cutting down a cherry tree with his "little hatchet" was the offense which nearly caused George Washington, the father of his country, to be disciplined by his irate parent on a fine March day in Virginia, in the year 1739, seems conclusively proven by an entry in the journal of Augustine Washington, his father, recently discovered by Ormond Lawrence Moore, of Bluff Point, among the relics of his forbear, John Lawrence, who settled in the town of Milo, Yates county, in the year 1789, the year in which George Washington was inaugurated for his first term as President of the United States.

Long before the birth of the immortal first President, the Lawrence and Washington families were connected by marital bonds. Lawrence was a family name in the Washington genealogy as far back as the time of the great-grandfather of George, and his grandfather's name was Lawrence Washington.

John Lawrence of Yates county was a relative of Commodore James Lawrence, who nobly distinguished himself in the naval annals of the American Revolution. Soon after the war and before he started out for his future Yates county home, he visited the Washington family, who were distantly related and friends, at Mount Vernon. When there, he must have been presented with the journal of the doings of Augustine, the father, then dead.

Ever since the present residence of Mr. Moore was built, in a corner of the attic has rested a little, old, leather trunk containing the papers of John Lawrence. Following a family tradition, the

trunk has been domiciled for the past hundred years or more by his oldest direct descendant. For several years before Mr. Moore came into possession of the trunk, it had been in the custody of an older brother of his father.

A few days ago Mr. Moore, having leisure time on his hands, determined to look over the contents of the trunk. He found many interesting letters and documents and upon opening an old record book he found on the fly leaf this inscription: "Augustine Washington, Westmoreland, Virginia. His Journal, March, 1732."

The book is about fourteen inches long by eleven wide, bound in leather, and contains several hundred pages of paper of a bluish white color. The writing is in ink, somewhat faded in the pages near the outside of the book but for the most part very black and clear.

At first Mr. Moore did not connect Augustine Washington with his famous son, but reading a few pages from the front, he was struck by this entry, under the date of April 5, 1732:

"My son, George Washington, baptized this day. Mr. Beverly Whiteing and Captain Christopher Brooks were his Godfathers. His Godmother was Mrs. Mildred Gregory."

Further on he found unimportant references to the son George, but the most interesting one was dated March 1, 1739, and reads:

"A fine day and warm. This A. M. I found my best young plum tree spoiled with a saw. I thought it was some vagabond, spoke of it at noon. My son George owned the deed. First I was vexed and minded to whip him, but did not. He was truthful and repentant. He cut it with my small handsaw."

After this there were few entries in the book. The last item was in the summer of 1739, in which Augustine writes that he is about to move to Suffolk county.

Mr. Moore, within the past few days, has shown the book to several people. In it Augustine speaks of his wife as Mary and there are many indubitable proofs that this Augustine Washington, the compiler, was the father of the Father of His Country.

Hereafter, if historical facts are to be respected, Washington's youthful truthfulness will be symbolized by a plum and a handsaw, instead of by a cherry and a hatchet.

Upon the appearance of the foregoing article, we made inquiry of the Librarian of Congress if he had any knowledge of the existence of a journal of Augustine Washington, and under date of March 9, 1918, Mr. J. C. Fitzpatrick, Acting Chief of the Manuscript Division, replied:

"The Manuscript Division has no knowledge of this journal of Augustine Washington nor of the entry respecting the plum tree, and can furnish no verification of the statement:

"Mr. Lawrence Washington, the son of the last owner of Mount Vernon, never heard of any such journal as this, and it is quite possible that knowledge of it would have reached him before this if it were in existence."

On the receipt of the foregoing information, and on March 14, 1918, we addressed a letter to Ormond L. Moore, Esq., Bluff Point, Yates county, N. Y. (which is a real post-office), stating our desire to verify the statement attributed to him and asking him for furthere information. We have received no reply from him and the letter has not been returned up to the time of the printing of this Report.

A confidential inquiry addressed to a reliable person in Penn Yan evoked the following reply:

"Believe the article you refer to is a fake pure and simple. The local correspondent of the Rochester *Democrat and Chronicle* is the author of many such items, but think this is first in digging up history. He is suggester of mixing peroxide hydrogen with chicken feed to make eggs white and another on having electric lights in chicken coops so chickens would lay both day and night, etc."

## SOME FAMOUS OAK TREES

The planting of an oak tree from Stratford-on-Avon, Eng., in Central Park, New York, in commemoration of the tercentenary of Shakespeare, described on page 177 preceding, recalls several oak trees which have been famous in history and literature.

The most famous American oak was the Charter Oak of Hartford, Conn., which was blown down in August, 1856. Its age was computed to be about 1,000 years. When Sir Edmond Andros was appointed Governor General of New England, he went to Hartford in 1687 to receive the Colonial Charter. This the colonists were loath to surrender, but, appearing to submit, carried it to the council chamber, where during the debate the lights were extinguished, and in the ensuing confusion the document was carried from the room to its subsequent hiding place in the hollow of the tree. Here it remained until 1689, when the deposition of Andros made further concealment unnecessary. (New International Encyclopedia, New York, 1914, Vol. V, pp. 82, 83.)

England has several noted oaks. At Cowthorpe is one having a circumference of 12 meters, or nearly 40 feet; it is said to have been an object of veneration for the inhabitants during centuries.

When Lord Byron made his first visit to his ancestral estate of Newstead, he planted an oak with the idea that as it flourished, so would he. ("Moore's Life of Lord Byron," London, Vol. I, p. 101.)

The Royal Oak at Boscobel, England, was grown from an acorn of that in which Charles II is said to have lain concealed for a whole day on September 6, 1651, after his defeat at Worcester on September 3 of that year. In memory of this royal adventure, the astronomer Halley in 1676 made up a new constellation out of twenty-four stars of the Ship, and named it "Oak of Charles." Royal Oak day is celebrated on May 29, the anniversary of the Restoration. (J. S. Fraser, "Balder the Beautiful," London, 1913, Vol. II, pp. 166, 167.)

Just after Sir Walter Scott's novel "Woodstock" had sold for more than £8000, and when there seemed to be a prospect that the burden of indebtedness which had weighed him down might be raised sooner than he had hoped, he wrote in his journal: "I have a curious fancy; I will go and set two or three acorns, and judge by their success in growing whether I shall succeed in clearing my way or not." (J. G. Lockart, "Life of Sir Walter Scott," Vol. VI, p. 283.)

Near the Castle of Dalhousie, not far from Edinburgh, there grows an oak-tree, called the Edgewell Tree, which is popularly believed to be linked to the fate of the family by a mysterious tie, for they say that when one of the family dies, or is about to die, a branch falls from the Edgewell Tree. Thus, on seeing a great bough drop from the tree on a quiet, still day in July, 1874, an old forester exclaimed, "The laird's deid noo!" and soon after news came that Fox Maule, eleventh Earl of Dalhousie, was dead. (Fraser's "Balder the Beautiful," London, 1913, Vol. II, p. 166; citing Sir Walter Scott's "Journal.")

In Prussia on the old road from Hanover to Osnabruck, at the village of Oster-Kappeln, there used to stand an ancient oak which put out its last green shoot in the year 1849. The tree was supposed to be contemporary with the Guelphs; and in the year 1866,

so fatal for the house of Hanover, on a calm summer afternoon, without any visible cause, the veteran suddenly fell with a crash and lay stretched across the high road. The peasants regarded its fall as an ill omen for the reigning family, and when King George V heard of it he gave orders that the giant trunk should be set up again, and it was done with much trouble and at great expense, the stump being supported in position by iron chains clamped to the neighboring trees. But the King's efforts to prop the falling fortunes of his house were vain; a few months after the fall of the oak Hanover formed part of the Prussian monarchy. (P. Wagler, "Die Eiche in alter and Neuer Zeit." Vol. II, pp. 85 *seq.* Berlin, 1891.)

## UNITED STATES SCHOOL GARDEN ARMY

In March, 1918, the Secretary of the Interior, through the Bureau of Education, called on Governors of States, Mayors of cities, State and County Superintendents of Schools, and school superintendents in cities, towns and villages throughout the country, to mobilize the "School Garden Army," as it is called. The appeal is ultimately to the children everywhere who have patches of ground at their service to raise upon them some kind of food crop. The idea is to utilize door-yards, back gardens, school lots, and every other available space, to augment the food output of the country. A memorandum from the Department of the Interior says:

"The Germans have organized their garden army years ago and just because they did do that very thing they have been able to laugh at the rest of the world for so long. For back of every bullet and behind every shell and under and over every cloud of poisonous gas and running every submarine and directing every aeroplane is a man who must keep up his energies with food. We might as well send our men to the trenches to face cannons and airships and poison gas and explosives dressed in a suit of pajamas with nothing but their bare hands for weapons, as to send our army overseas without enough provisions to keep them not only alive but in fighting thim when they get there. Where are we going to get the food to send them? We have just one storehouse from which to draw, and that storehouse is in the fertile fields and the rich harvests of our own country. Our troops abroad need flour and sugar and coffee and tea and corn and meat — we must send

them these things or be ready to bow our heads under the German heel."

The Interior Department expects very valuable results if 5,000,000 school children are mobilized, organized, and drilled in planting these gardens. The plan is to form companies of workers according to a sort of military system, with chevrons and other marks of distinction for the officers.

The Department also sends out the suggestion of Mrs. Winifred Black, journalist and philanthropist, that each child name his or her garden after some soldier who is in the service, so that when the vegetables raised in the garden are exhibited at the County Fair or are sold or used, they will be known by the name of that soldier. Mrs. Black says:

"What are you going to name that little garden of yours? I will tell you what I am going to name mine — mine is going to be called Sam Brown — because Sam Brown is a boy who never had a chance in his life till the war broke out, and then he saw his chance and took it, and he is over there in France to-day fighting for you and for me and for Uncle Sam, and I am going to name my little garden after him."

## UNITED STATES FLAGS

### Historical Address by Congressman Hicks

On June 14, 1917, Hon. Frederick C. Hicks, Member of Congress, of Port Washington, N. Y., delivered in Congress an historical address on the subject of the American flag. Its text will be found on pages 8092–8100 of the Congressional Record of September 24, 1917. The address, delivered on the 104th anniversary of the adoption of the United States flag, is replete with historical information. We note that Congressman Hicks takes the position, which appears to be borne out by the facts, that there is no foundation for the claim that the stars and stripes are taken from Washington's coat-of-arms. (See our Annual Report for 1912, pp. 233–239.)

### Dobbs Ferry, N. Y., Flag Not Revolutionary

Under date of Dobbs Ferry, N. Y., November 23, 1917, a despatch appeared in New York papers stating that workmen, in excavating along the foundation wall of an old building in Main

street near Chestnut street, dislodged a loose stone in the wall exposing a crevice in which was a buff-colored waistcoat of the sort worn by Washington's Continental troops, rolled about a faded flag, both of which were later pronounced to be "genuine and rare relics of the War for Independence." It was stated that the coat was motheaten and almost in shreds, but the flag, made of linen, was well preserved. It was 24 by 36 inches and painted across the top were the words: "Give us Liberty or Give us Death." At the left were pictures of two daggers with a red hat resting on the tip of one. It was also stated that the flag was thought to have been carried in the battle of White Plains, and that some soldier hid it in the wall at that time.

The interesting story of this "Revolutionary" flag must be placed in the category of exploded historical myths with the Viking anchor (telegraph pole guy anchor) discovered in Wisconsin, the stone columns (tubular drill cores) found in excavating for a New York office building; the Indian dug-out (wooden boat with iron nails) excavated near Brooklyn bridge; and the Washington plum-tree story (given elsewhere in this Report) which we have investigated in times past; for upon careful examination the Dobbs Ferry flag was found to be stitched with a sewing machine.

### The Service Flag

In 1917, an entirely new flag came into existence and promises to become a permanent addition to the number of American flags. It is called the "service flag," and is used to indicate that one or more members of a household, or business house, are in the military or naval service of the country. The flag is a patented private invention and has no official standing with the United States government, but it seems to meet a popular desire and to perform a peculiar and useful function not performed in any other way.

The standard proportions of the service flag are a width of four and a length of five units, but as a matter of fact the flags are made of varying proportions. The design consists of a white center and red border, the width of the border being about one-third of the narrow width of the flag. In the center of the white field is a blue star if one person in the service, and a corresponding number of stars if more than one person are in the service. On some flags

hung out by large corporations, on which it is not practicable to place a star for each person, the stars are arranged in the form of numbers. For instance, the flag hung across Broadway, New York City, in front of the American Telephone and Telegraph Building, bears the number " 6861 " outlined with stars in the white field. This flag is 32 by 52 feet in size.

The service flag was designed and patented by Capt. R. L. Queisser, of Cleveland, Ohio, a business man who was an officer in the National Guard and served on the Mexican border. The Chamber of Commerce and the City Council of Cleveland recommended its use, and it became instantly popular throughout the country. At the last session of Congress a bill was introduced to make the flag official, and it was suggested that $50,000 be appropriated to provide flags for families having sons and daughters in service, but the pressure of war legislation prevented the passage of the measure. The Secretary of War, however, gave it recognition to the extent of allowing a service flag showing the number of civilian employes of the War Department in the service to be made.

Several suggestions have been made of ways to indicate the death of a person represented by a blue star. They include the substitution of a black star, a gold star, or a black-edged blue star on the white field, or the placing of a white star on the red border.

### The Liberty Loan Flag

On March 6, 1918, announcement was made from Washington that another flag had been designed, to be awarded to cities exceeding their quotas of sales of government bonds which were to be offered in the third Liberty Loan, beginning April 6. The flag has a white field and red border, and upon the white field are three blue stripes. If a city exceeds its quota, it will receive such a flag from the government. If a city doubles its quota a star will be added to its flag, and a tripling of the quota will be recognized by two stars.

Among other features of a system of honors devised for the third Liberty Loan is the plan of giving a window card bearing a reproduction of the flag to each purchaser of a bond, and of establishing honor rolls in each community, or organization of any kind, to bear the names of subscribers.

It is planned also to unfurl a State honor flag at each State capital after the campaign is ended, to bear the names and records of each community which won a quota flag. A national flag to be flown at Washington after the campaign will bear the records of States.

## AMERICAN SOLDIERS' GRAVES IN FOREIGN SOIL

### Offer of Services by this Society to the Government

On December 13, 1917, the American Scenic and Historic Preservation Society formally tendered to the United States Government services similar to those rendered by a civilian organization to the British Government in the care of soldiers' graves in France. The Secretary of War has encouraged the Society to think that its services may be accepted, perhaps after the war is over, but the Society is hopeful that the government upon further consideration may see the desirability of availing itself of this aid sooner.

Soon after the state of war between the United States and Germany was declared, Dr. George F. Kunz, the president of this Society, in anticipation of the time when the care of American soldiers' graves in Europe would be necessary, began a correspondence with the British War Office with a view to getting information as to the British system of preserving the personal identity of the last resting places of the heroic dead of that nation, and was most courteously supplied with very full data and photographs illustrating the system which that government had developed during the three years of war that had then elapsed. The British system, details of which will appear more fully in Appendix A of this Report, provides for the recovery of the bodies of the dead from the battlefields, their identification, their burial, the marking and registration of the graves, the care and adornment of the graves, notification of relatives, the furnishing of photographs of graves to relatives, etc., etc.

The Trustees of the American Scenic and Historic Preservation Society, believing that the marking and care of the places made sacred and historic by the burial of American heroes on foreign soil was a work peculiarly appropriate to its purposes, and one in which its executive experience in the management of large state

properties during the past 22 years peculiarly fitted it, authorized the appointment of a committee to tender the services of the Society to the United States Government for this purpose. The committee selected for this purpose was composed of Dr. George F. Kunz, President; Col. Henry W. Sackett, First Vice-President; Hon. Herbert L. Bridgman, Second Vice-President; Hon. N. Taylor Phillips, Treasurer; and Dr. Edward Hagaman Hall, Secretary. Col. Sackett is Chairman of the committee.

Pursuant to appointment made by Dr. Kunz with the Secretary of War, Col. Sackett and Dr. Hall went to Washington, and on December 13, 1917, called upon Captain H. R. Lemly, U. S. A., retired, Chief of the Cemeterial Division, office of the Quartermaster-General of the Army. This division, which for years has had charge of the national cemeteries in the United States, had recently been authorized by the President to organize a service corresponding to the British Directorate of Graves Registration and Enquiries, and at that time had one unit of 50 men and two officers in France and another unit of equal size in training in New Jersey. The representatives of this Society communicated the offer of this organization to assist the Government and tendered the services of Col. Sackett, who had arranged his important professional affairs so that he could absent himself for the purpose of going to France in aid of this work. Capt. Lemly explained some details of the Government's plans, and conveyed the idea that the Government's arrangements were adequate to the needs of the army.

On December 16, 1917, three days after this call on Capt. Lemly, the following interesting announcement appeared in the New York *Times,* under date of "With the American Army in France, December 14 — (Associated Press)":

"The organization has been announced of a branch of the army whose sole duty is to arrange for the proper burial of our soldiers who die in France and for the care of their graves. Every detail has been worked out, and the American organization is expected to surpass similar organizations in the British and French armies, as the best features have been taken from both.

"A unit of two officers and fifty men is provided for each army division. They are to arrange for proper burials in their respective divisions and also to take care of the divisional cemetery. The size of the units is to be increased if the needs demand. There also

is a headquarters detachment under command of a Colonel, and reserve battalions are to be available for detachment with immediate assignment where needed.

"To the American expeditionary force land has been assigned by the French authorities for use as semi-permanent or temporary cemeteries, and officers have just returned from a trip through the country locating cemeteries which may be used wholly or partly for American dead. Already two large burial plots have been fenced in and posted, and a number of small ones arranged near the front as temporary resting places for the bodies of Americans who may be killed in action.

"Each grave in the main cemeteries will have a cross at the head, and an iron marker. Temporary graves will be marked by pegs and a cross or other headstone."

On January 13, 1918, the Brooklyn *Standard Union* published a column-and-a-half editorial commending the general work of the American Scenic and Historic Preservation Society, in the course of which it said concerning the subject of the care of soldiers' graves:

"At its annual meeting, this week, the Society will publicly explain and defend its project, not yet fully developed, to undertake, in some sort of semi-official relation with the Government, the proper marking, care and protection of the graves of American soldiers who may fall on foreign soil in defense of their country and of liberty during this war to make the world safe for freemen. Only the outlines of the idea have been foreshadowed, scarcely formulated, but enough progress has already been made to determine the necessity for popular discussion and support if the project is not to be strangled by official red tape or permitted to die of inanition through official indifference. Outgivings by the War Department, which has been unofficially approached on the matter, indicate clearly the inertia born of confirmed bureaucratic methods, and the rather thinly veiled jealousy with which the military arm of the Government always views and judges the civil, which creates, supports and ought to control it. It is already fairly evident that only an intelligent and convincing appeal to public opinion and enlightened patriotism will put the Society's enterprise on the plane and command for it the respect and support to which its merit entitles it.

"It should be observed that the Society does not seek to do what the Government ought to and may better do; it asks no financial support nor official authority. It proposes to enlarge and supplement with practical efficiency, artistic taste and a personal

note of appreciation and sympathy the mechanical and purely formal function of the Government, which will give to the foreign resting places of the soldier dead of this war the honors and the kindly tributes in word, flag and flower which have made Memorial Day the most precious and tenderest of all our National holidays. It is not altogether creditable that the first recognition of American soldiers, fallen on foreign soil should have been by alien hands, and the inscriptions on the rude crosses in a strange tongue, pathetic and creditable to those who accorded these last honors, hardly so to the great, proud nation which permitted them, or made them necessary. Competent authorities say that America has much yet to learn from France and England in the matter of paying honors to those who die for her and guarding their memories for present and future.

"A very practical suggestion, if one but thinks; these God's acres of the future are sure to be visited every year by pilgrims from all countries, and America's estimate of her saviors and defenders will be on exhibition, an object lesson to the whole world. It will be a great pity, a national and continuing humiliation, if we fail to measure up to the duty and the opportunity to show that, as Mr. Lincoln said at Gettysburg, 'not only these have not died in vain,' but that in loving care, in permanent and fitting memorials, in artistic and appropriate expression, the great republic is worthy of her sons and the sacrifice they made for her. Gettysburg, Chickamauga and all the great national cemeteries, are to-day eloquent eternal object lessons in patriotism and of the last full measure of devotion, but they were long in coming, a generation, a half century after the fact, and it is wise to learn the lesson of the future by experience."

At the annual meeting of the Society held in the large auditorium of the American Museum of Natural History on the evening of Thursday, January 17, 1918, Dr. Kunz and Col. Sackett both spoke on the subject of the care of American soldiers' graves, Col. Sackett showing on the screen many stereopticon views made from photographs furnished by the British government, illustrating the British system. Dr. Hall also spoke and showed illustrations made from photographs furnished by the French government, bearing on related subjects. Col. Sackett, in voicing the sentiments of this Society, said in part:

"The American people have slowly, very slowly, awakened to the full significance of their part in this war. More than nine months have passed since we joined the sad brotherhood of the nations that are united in the unyielding purpose to fight the

powers of evil that if unconquered would destroy human freedom and liberty. Splendid have been the resolution and the courage, the unselfish devotion and the spirit of sacrifice displayed by the American people during those nine months. We shall fight those powers of evil, with all our soul and might, to the death.

"But there has not yet come to us, as a nation, the full realization of the bitterness of the cup we shall be called upon to drink. That realization will not come until the days, certain to arrive before the end, when thousands upon thousands of the finest and bravest of our young men are slain upon the battle-field.

"When that time does come, the greatest tragedies will not be those enacted in the trenches or anywhere upon the battle-front or upon the seas. It will be in American homes that the shot and shell of the enemy will do their deadliest and most terrible work. For every American soldier killed upon the soil of France, or sailor who goes down beneath the waves of the Atlantic, a dart of the cruelest sorrow will pierce the hearts of many more in the homes of America from which those brave men went forth to die for their country.

"Who can measure what we owe, and shall owe, to our soldiers and sailors! But do not let us forget what we owe to the fathers and the mothers, the wives, the sisters and the daughters, who made perhaps a sublimer sacrifice in sending out our country's defenders with their smiles, their blessings and their prayers.

"When those darkest days come, as we must steel our hearts to realize they must come, in which on the wires under the ocean shall arrive in rapid succession the names of our fallen heroes, shall America then fail to do all that lies within her power to assuage the grief of those to whom the cable shall bring the feared message of the loss of loved ones?

"When the first fierce pangs of sorrow shall begin to soften, what, think you, will be the most insistent question to arise in the heart of every grief-stricken mother, of every bereaved father, of every wife just made a widow, which will grow more importunate until the answer comes: 'Where have they laid to rest my boy, my husband? Are they making for him a grave that shall be so marked and cared for, that it will be preserved for the times to come and be known and recognized as my hero's grave, by all the world — by me, if God gives me to go there and kneel at it in coming times of peace; if not, to visit it in my dreams and prayers?'

"My friends, America must not fail to meet that cry of agonized inquiry with the best answer that can be given, the answer that will do most to soothe those broken hearts and most mitigate their grief. France has not failed to meet this sacred obligation. She

has met it nobly, gratefully, with loving remembrance, without stint of cost or tender care. So has Great Britain. So God grant that America shall do.

" Sir Douglas Haig knew the meaning of this when he said that a kind of work ' which does not directly contribute to the successful termination of the War ' may still ' have an extraordinary moral value to the troops in the field, as well as to the relatives and friends of the dead at home.'

" At the solicitation of President Kunz, who has been working on the matter for more than a year, the British Government has furnished to this Society the data showing the history of the French and British work in the War in the registration and care of soldiers' graves, illustrated with many photographs; and these in turn were handed over by us to our Secretary of War, to supplement the information which was being secured by American military authorities. It would be impracticable in the short time allotted to me and this subject to-night to do more than touch upon the most salient points, and especially those in which this Society hopes to prove an aid to the Government, illustrating them with a few lantern slides.

" In the early stages of the War, a soldier was commonly buried close to the place where he fell, as was generally the case in our Civil War. All over that portion of north-western France where there had been hard fighting before those places were reclaimed from the enemy, there are to-day to be found many low wooden crosses, showing where soldiers were buried — in farmyards and orchards, in cottage gardens, in fields and even by the roadside.

" But it soon became manifest that such methods could not be continued in a war of this magnitude, if the identity of soldiers' graves was to be preserved and permanent materials were to exist of their last resting place. France could not turn the whole 300 miles of her eastern war front, many miles in depth, into a permanent military cemetery. As the war went on the officers of the allied armies had been swift to recognize the desirability of burying their dead soldiers in the nearest of the 300 recognized cemeteries behind the lines in France.

" But early in 1915 it became clear that it would be necessary to do two things never before attempted upon such an extensive scale in any previous war — first, to establish an exact system for the registration and care of the graves of soldiers who died in France in this war and the giving to their families of definite information in regard thereto, and, second, to set apart certain selected pieces of ground for new military cemeteries.

" Did any nation ever meet such a need as this second one so nobly as France did when in December, 1915, she enacted a law

providing for the acquisition of land for such special cemeteries, in the name of the French Government, to be maintained forever for that purpose. Besides her own dead heroes, France had in mind at that time especial provision for the burial of British soldiers. But so generous was her thought that the language of the Act is broad enough to include without amendment provision for American soldiers. In the exact words of that law, it is 'to provide the permanent resting places * * * for soldiers of the French *or Allied Armies* who are killed or die of wounds or sickness during the War.'

"There is not time on this occasion to go into details regarding the methods followed in selecting those sites. It is sufficient to know that such care is taken that the friends of American soldiers may absolutely depend upon the spots chosen being those which will not later be disturbed by the industries or other activities of times of peace. Our dead soldiers buried there will also lie in places of great natural beauty. It was my fortune a few weeks preceding the outbreak of the war to pass through those parts of France that have felt its worst ravages and devastation. It was one of the loveliest regions on earth — the very garden of the Lord. In coming times of peace, those burial places will be American shrines; and let none forget what France has done to erect them.

"With the same noble generosity France offered to care for these cemeteries in perpetuity, for the dead heroes of France and her Allies alike. But Great Britain would have been false to her best traditions and instincts if she had permitted France to assume this solemn burden and privilege alone. And so the British Government, in agreement with the French Government, has undertaken to provide for the maintenance of the cemeteries for British soldiers in perpetuity and has appointed a National Committee to care for the graves of British officers and men after the War. Until the close of hostilities their care and maintenance are under the same official direction as the burials and markings of graves — namely, the British Commission of Graves' Registration and Enquiries. (See Appendix A of this Report, and plates 57–70.)

"This Commission is one of the greatest organizations that the war has brought into existence. In every war, as has been well said by one of those chiefly responsible for the creation of that Commission, it has been one of the fears haunting a soldier's friends that his body may be utterly lost. In this war there must be some such irretrivable losses. But in no great war has so much been done as in this, to prevent the addition of that special torment to the pains of anxiety and bereavement. This the British people owe chiefly to that Commission and its coadjutors.

"The success of that Commission has grown out of its thorough and effective organization. It did not come into being until March, 1915. All through the fall of 1914 and the winter following, there were only disconnected and spasmodic efforts to work out a plan of burial and registration of the graves of soldiers. National feeling roused the Government to action. Mr. Fabian Ware, who had previously worked under the British Red Cross, with French troops, and had become deeply interested in the subject, was selected to organize the work. He was given a commission as Brigadier General and made Director of the Commission.

"Under this Directorate are various Graves' Registration Units, which in turn are divided into sections. The most of these units operate at the front — the rest behind the lines. The death of a soldier at the front is at once reported to the Director as well as to the base. If he has been killed in action, it is still unavoidable sometimes that he should be buried, in the old way, near the trench. But that is only where such burial is unavoidable. Whenever possible the body is carried back for burial in the permanent cemeteries where the soldiers there in charge do all that remains to be done. And the best of authorities have assured the friends of soldiers at home that there is nothing perfunctory about these funerals, that 'everything is done as tenderly and reverently as if the dead man were in an English churchyard among themselves.'

"But whether buried at the trench or in the cemetery, whether the body is laid to rest with the battle still raging round or with the solemn service of the English church, the same meticulous care is observed that the identity of the man shall be preserved by markings at his grave that shall serve as a perpetual memorial."

Col. Sackett then showed a number of stereopticon views, explaining them as they appeared on the screen, and in conclusion said:

"Just a word in closing as to the purpose of this Society to aid our Government in its care of the graves of American soldiers in France. We cannot say to-night that we are actually in this branch of the American Government service; but we do cherish strong hopes that we soon shall be.

"The Secretary of War has received with the most courteous cordiality the proffer of our services and indicated his intention to avail of them. Our disappointment lies in his opinion that the time is not yet ripe to begin our work. We earnestly believe, on the other hand, and hope yet to persuade Secretary Baker, that our work cannot begin too soon.

"We have no thought of interference with the admirable plans, admirable so far as they have yet gone, of the Quartermaster-

General's office, very like the British methods, for the marking and registration of the graves of American soldiers. The very name of the American Scenic and Historic Preservation Society would indicate our appropriate part in the work — the preservation of what will in future times be in American eyes the most precious historic spots in Europe — the graves of American soldiers in France. We think, and we do not believe the Secretary of War will disagree, that the way to preserve what is to be saved is, first, to run no risk that it be lost before the work of preservation begins. That is the work before us. We believe that it is an instant duty — not a future one."

### American Casualties to April 8, 1918

The last official announcement made before the transmission of this Report shows that up to and including April 11, 1918, the casualties of the American expeditionary force overseas were as follows:

| Deaths | |
|---|---|
| Killed in action | 228 |
| Killed or prisoner | 1 |
| Killed by accident | 181 |
| Died of disease | 867 |
| Lost at sea | 237 |
| Died of wounds | 69 |
| Civilians | 7 |
| Gas attack, suicide, executed, unknown causes | 42 |
| Total deaths | 1,632 |
| Wounded | 1,606 |
| Captured | 43 |
| Missing | 30 |
| Grand total | 3,311 |

### Graves of First Three American Soldiers Killed in Battle

In attempting to say who were the first American heroes to give their lives in the existing war, one must be careful to qualify his statement so that it will be accurate. The civilians who went down with the Lusitania, although they were not wearing uniforms and were unresisting non-combatants, will always be accounted among the first American martyrs in the present conflict. There were also Americans in the French air-service, and men who chivalrously donned the uniforms of our present allies before the United

States entered the conflict, who made the supreme sacrifice and whose names will stand near the beginning of the long roll of honor that will ultimately be written. There is official authority, however, for declaring that the first three American soldiers to be killed on the field of battle were:

James B. Gresham.
Merle D. Hay.
Thomas F. Enright.

Corporal Gresham came from Evansville, Ind.; Private Hay from Glidden, Ia.; and Private Enright from Pittsburg, Penn. They were killed in a raid on November 3, 1917, and are buried in a little cemetery in the commune of Bathelemont, in Lorraine, not far from Nancy. The town near which they were buried is a mere hamlet of low, gray-walled, red-roofed houses, partly destroyed, situated on a bleak, dead grass ridge. The bodies were carried in solemn procession to the village, and out between two buildings to a ten acre field surrounded by a high gray stone wall. The field's sloping surface is yet covered with rusty wire entanglements. Along the left wall were already two score graves of French soldiers, adorned with artificial wreaths, some of them three years old. At the bottom of the angle of the wall graves were dug for the Americans. There they were laid to rest with religious and military ceremonies on November 4. By command of Gen. Bordeaux, an altar was improvised and elaborately decorated in the village, and the chaplain of a French regiment conducted the church services in the presence of the following detachments of troops: One company of French infantry, one section of French artillery, one section of French engineers, one detachment of French sailors, one company of United States infantry, one section of United States field artillery, one squad of engineers. A major of French artillery commanded the troops.

Following the church ceremony the cortege proceeded to a field adjacent to the village and formed on three sides of a square, the bodies being placed in front of the graves on the fourth side. An American flag, provided by the French, had been placed over the caskets.

At 2 o'clock Gen. Bordeaux, accompanied by his full staff, his infantry, artillery and engineer chiefs and a representative

of the French corps commander, arrived and took position. The troops presented arms and the French field music and band played a funeral march. The chaplain performed the religious ceremony at the graves. Then Gen. Bordeaux advanced to the center of the square and spoke as follows:

"In the name of the ——— Division, in the name of the French Army, and in the name of France, I bid farewell to Corporal Gresham, Private Enright and Private Hay of the Sixteenth Infantry, American Army.

"Of their own free will they had left their happy and prosperous country to come over here. They knew that the war continued in Europe; they knew that the forces fighting for honor, love, justice, civilization, were still checked by the long-prepared forces which are serving the powers of brutal domination, oppression, barbarity. They knew that an effort was still necessary. They wished to give us their help; and also their generous hearts did not forget old historical memories, while others forgot more recent ones.

"They ignored nothing of the circumstances. Nothing had been concealed from them — neither the length nor hardships of this war, nor the violence of the battle, nor the dreadfulness of the new weapons, nor the perfidy of the foe. Nothing stopped them.

"They had accepted to lead a hard and strenuous life; they had crossed the ocean despite great peril; they had taken their place on the front by our side; they have fallen facing the foe in a hard and desperate hand-to-hand fight. Honor to them! Their families, their friends, and their fellow-citizens will be proud when they learn of their death.

"Men! These graves, the first to be dug in our national soil, at but a short distance from the enemy, are as a mark of the mighty hand of our allies, firmly clinging to the common task, confirming the will of the people and Army of the United States to fight with us to a finish; ready to sacrifice as long as it will be necessary, until final victory for the noblest of causes — that of the liberty of nations, the weak as well as the mighty.

"Thus the death of this humble corporal and of these two private soldiers appears to us with extraordinary grandeur.

"We will therefore ask that the mortal remains of these young men be left here — be left to us forever.* We will inscribe on their tombs:

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* The official papers transmitting this address to the War Department were endorsed by Major-General William L. Sibert:

"Forwarded, recommending that the request of General Bordeaux to have the remains of the men left at Bathelemont be favorably considered."

" 'Here lie the first soldiers of the United States Republic to fall on the soil of France for Justice and Liberty.'

" The passer-by will stop and uncover his head. The travelers of France, of the allied countries, of America, the men of heart who will come to visit our battlefield of Lorraine, will go out of their way to come here — to bring to these graves the tribute of their respect and of their gratefulness.

" Corporal Gresham, Private Enright, Private Hay: In the name of France, I thank you. God receive your souls. Farewell! "

The company of United States infantry then fired three volleys and its trumpeter sounded taps. All the troops were then marched by the graves, saluting as they passed. General Bordeaux and his staff advanced to the graves, saluted and departed. Throughout the ceremony at the graves, French batteries, from their positions at the trenches, fired minute guns over the village. The entire ceremony was most impressive.

Since that funeral, other Americans have been buried beside the first three, so that by December 13, 1917, the number of mounds was eleven. At the head of each is a roughly made wooden cross, five feet high. On them are octagonal wooden name plates on which are the full name and regimental number of each man, and the date of death. An intertwined background of the Stars and Stripes and the French tricolor makes them stand out prominently. The first three graves are enclosed by a little fence, and on it is a wooden sign, with black letters painted on a white background. The inscription is:

" Ici reposent les premiers soldats de l'illustre republique des Etats-Unis tombes en terre France pour Justice et Liberte, Novembre 3, 1917."

" Here lie the first soldiers of the noble republic of the United States to fall on French soil for justice and liberty, November 3, 1917."

In communicating the deaths of Messrs. Enright, Hay and Gresham to the Mayors of the cities from which they came, Mons. L. Mirman, Prefect of the Department of Meurthe-et-Moselle, writing from Nancy, wrote:

" All three fell facing the enemy, devotees of duty, sons worthy of your grand and noble country.

"I salute them in their death. I salute them in the name of the people of Lorraine, in the person of their chiefs, their valiant comrades in whose midst died those first three heroes of this grand war of independence.

"This is, indeed, a war of independence, which sustains to-day our allied nations. It behooves us to free ourselves, to free the world from the most formidable powers of oppression which the genius of evil has ever created.

"Those three young men have fought and died for the right, for liberty, for civilization against German imperialism, a shame and a menace to humanity. Their names will not be forgotten."

Through the courtesy of the American Ambassador to France, Hon. William G. Sharp, we learn with deep emotion of the generous purpose of the people of the communes of Meurthe-et-Moselle, notwithstanding the terrible sufferings and privations which they have endured, to erect a monument in memory of these first three American heroes. The inscription on the front of the monument appears in plate 58. The inscription on the back of the monument is as follows:

> Ici, en terre lorraine, reposent les trois premiers Soldats américains tués à l'ennemi le 3 Novembre, 1917: Caporal James B. Gresham (d'Evansville), Soldat Thomas F. Enright (de Pittsburg), Soldat Merle D. Hay (de Glidden), Cie. F—16e Regt. Infie.—1re Division.
>
> En fils digne de leur grande et noble Nation, ils ont combattu pour le Droit, pour la Liberté, pour la Civilisation, contre l'Impérialisme allemand, fléau du Genre humain.
>
> Ils sont morts au Champ d'Honneur.

The correspondence between Ambassador Sharp and Prefect Mirman in regard to this project follows:

(Translation)

PREFECTURE OF MEURTHE-ET-MOSELLE
OFFICE OF THE PREFECT

Nancy, December 7, 1917.

Mr. Ambassador:

The first three soldiers of the United States army killed on the field of honor in the course of the great war of independence of people's repose on Lorraine soil, not far from Nancy, in the little cemetery of the commune of Bathelemont. After victory, it is probable that our two nations will commemorate, by a monument worthy of this great event, the alliance of their arms against a common enemy who is truly the enemy of mankind. But, in

perfect accord with the ideas of my administrators, I have thought that in the meantime and from to-day we have the desire to raise up a modest mounment in honor of these sons of the United States, the first to fall on the soil of France.

I have ordered the monument. I am hastening the execution of it; I wish that, with the briefest delay, it should be erected in my little bombarded Lorraine city. All the communes of Meurthe-et-Moselle — all the communes not invaded — have desired, at their common expense, to pay for it, not that the cost is considerable, but unanimously to associate themselves with this manifestation of sympathy toward your noble nation.

In a few days I shall write and ask you to accept a small, reduced-size model of our monument. We would be happy if another model could be forwarded to President Wilson, and I wish to ask you if I could send it to you at the Embassy, and if you would be good enough to ensure the expedition of it to the illustrious chief of the Republic of the United States.

Kindly accept, Mr. Ambassador, the assurance of my respectfully devoted sentiments.

L. Mirman.

EMBASSY OF
THE UNITED STATES OF AMERICA

Paris, December 10, 1917.

Mr. Prefect:

I wish to acknowledge with feelings of heartfelt appreciation the very beautiful and touching letter you have written me under date of the 7th instant, in which you outline the plan of your compatriots residing in the different communes of your Department to erect a monument in the little cemetery of Bathelemont in honor of the first three soldiers of the United States Army who fell on the battlefield near that place.

It is a beautiful sentiment that prompts such a purpose, and in the name of my country I wish to thank you for it.

I anticipate with pleasure receiving the small model of this proposed monument, and will promptly carry out your wish to have it forwarded to President Wilson, to whom I shall not fail to transmit, at the same time, a copy of your letter.

In expressing to you once more my deep appreciation of this new evidence of sympathy,

Believe me, my dear Mr. Prefect,

Very sincerely yours,

Wm. G. Sharp.

Monsieur Mirman,
Prefect de Meurthe-et-Moselle,
Nancy.

PREFECTURE OF MEURTHE-ET-MOSELLE

OFFICE OF THE PREFECT

Nancy, January 4, 1918.

Mr. Ambassador:

I am having forwarded to you three cases which I hope will reach the Embassy on Monday or Tuesday. Each case contains a reduced model of the modest monument we purpose to erect at Bathelemont in honor of the first American soldiers fallen on the battlefield. May I beg you to ensure the shipment to President Wilson of one case bearing his name, and likewise as regards General Pershing, whose headquarters I am ignorant of. Finally, I beg you kindly to accept the third as a tribute of respectful gratitude from our Lorraine communes. I write "Lorraine communes" as it has been my particular wish that this monument be erected at the mutual expense of the non-invaded towns and villages of Meurthe-et-Moselle and each Municipality has heartily rallied to this suggestion.

The monument is in course of execution, not yet on the spot where it will be placed, but in our school for Building Apprenticeship where the stones are being cut. It will only be possible to put these stones into place when the period of heavy frost we are now passing through shall have ended. You would greatly honor us by consenting, when the time comes, to preside over the inauguration ceremony.

I am also sending you, under separate cover, twenty copies of the photograph of our monument; I hold at your disposal as many more as you may desire. I would like to send a copy of this photograph to each of the American Universities if you will be so kind as to send me a list of the latter.

I am now planning with the Mayor of Nancy the organization in our Lorraine city — and, if possible, on the Place Stanislas itself — of an Allied Club destined essentially for the officers and men of the United States army. I would especially like that any American soldier, whether he be a doctor, a University man, an architect, an engineer or a business man, should find means, in such a club, of entering into friendly relations with some French "colleague" of his own specialty. I am hoping that, by the time you will come to Nancy, this organization will be in working order.

I beg you, my dear Mr. Sharp, to kindly accept my best wishes and to believe me,

Yours respectfully,

L. Mirman.

EMBASSY OF
THE UNITED STATES OF AMERICA

January 16, 1918.

My dear Mr. Prefect:

It was with keen anticipation that I awaited the arrival of the models of the monument which is to be erected in the little cemetery of the commune of Bathelemont, in memory of the first three American soldiers to fall on the soil of Lorraine in defence of our united cause of Liberty and Humanity.

My anticipation was fully realized when, upon opening the particular case consigned to me, I found the well-executed and artistic model which it enclosed. Those consigned to the President of the United States and General Pershing arrived at the same time. I will have the one sent over to Washington at the first opportunity and the other I hold at the Embassy awaiting the orders of General Pershing.

I am sure that my distinguished compatriots will appreciate, as I do, this new evidence of the bond of tender sympathy between our peoples which has been manifested by the communes of Meurthe-et-Moselle. The beautiful sentiment which prompted this gracious action will not be lost on the American public, who have been informed of it.

May I take this opportunity also to acknowledge the receipt of the photographs of the monument, and to thank you for the same. Some of them I am sending over to the State Department and others of those of my countrymen who have always had nearest to their hearts the love of France.

Will you accept, my dear Prefect, the renewed expression of my friendship and personal esteem.

Cordially and sincerely yours,

Wm. G. Sharp.

Monsieur Mirman,
Prefect de Meurthe-et-Moselle,
Nancy.

### First American Soldiers' Graves on British Soil

The first Americans to be buried on British soil in the present war were those who lost their lives when the steamship Tuscania was torpedoed on Tuesday, February 5, 1918. The Tuscania was sunk off the north coast of Ireland apparently just as she was about to enter the North Channel, for the bodies of most of those

who lost their lives were washed up on the bleak shores of the island of Islay on the west coast of Scotland.

The Tuscania carried a total of 2,401 souls, of whom 2,177 were in the military service and 224 civilians, including two women. Of the 2,177 men in the military service, 117 were officers.

The disaster was announced in the American press on February 8, and the accounts which followed during the succeeding days gave evidence of the wonderful discipline and heroism of those on board who were "green troops," not yet tried and steadied by the experience and discipline of war.

Fortunately the Tuscania settled slowly, though she listed badly, and the sea was smooth, so that the work of taking to the boats was very orderly. When the ship was struck, the alarm quickly summoned the passengers in contingents to various quarters, whence they were marched to their respective life boats. An illustration of the self-control of the men is afforded by the conduct of two boat loads who assembled at their rendezvous, only to find that their boats had been smashed. The officer in command of them said: "The men lined up on deck at attention and all preserved the utmost composure until a destroyer came alongside and transferred the men from the gradually sinking ship. We stood alongside until the last man was taken off who, as might be expected, was the Captain of the ship. The patients in the hospital, including several cases of scarlatina and fever, were among the first taken off." A survivor said that Captain McLean was apparently the coolest man on board and acted "just like a father looking after his children."

As soon as the vessel was struck, signals for help were sent out and other vessels went to her aid, picking up survivors in many of the small boats and those who were still in the water, but some of the life boats carried their passengers to the nearest shores without the aid of the rescuers.

The survivors were landed at Buncrana and Londonderry, Ireland, and at Charlotte (island of Islay) and Glasgow, Scotland, and other places on the two coasts, and were given the utmost care that local hospitality could afford.

Bodies of the dead, to the total of 159, were cast up by the sea upon the coast of the island of Islay during the next six days.

The bodies came ashore at eight widely separated places, but mainly at three localities. Over 60 were washed up within a space not longer than two city blocks. Twenty miles farther north 49 were found. And about midway between these two places, 44 were found in a small cove.

The bodies were buried at three places near the places where the largest numbers were found, the ceremonies taking place from day to day as groups of bodies were recovered. In describing one of these funerals which took place on February 11 near Charlotte, on the island of Islay, a writer says that the burial was at the water's edge at the base of rocky cliffs, and was picturesque in the extreme. All the tiny villages for miles around were in mourning for the Americans, and farm and fisher folk came great distances to attend the ceremonies. Twenty-five American survivors of the disaster who had been left behind for the purpose, assisted the natives in digging the graves into which the khaki-clad troopers tenderly placed their dead comrades. Looking down from the top of the cliffs 300 feet above stood the mourners, headed by a British Colonel and an American private carrying an "Old Glory" made for the occasion by a group of Scotch women, who, on learning that the Americans had no large flag, obtained a small silk handkerchief edition of the flag from a sergeant and remained up all night copying it on a large scale.* Two clergymen came many miles and read the Scotch and Episcopal services, after which

* When the news of the making of the flag by the women of Port Ellen reached the United States, Mrs. W. H. Townsend of Flushing, L. I., wrote to them a letter of thanks, and received in reply from Mrs. Jessie L. Cameron of Tighantruain, Port Ellen, Islay, Scotland, the following letter:

Dear Madam:

I was very much impressed on reading your kindly letter to the ladies of Port Ellen and feel I should like to write and thank you in their name and my own for such. We all feel assured that the American soldiers were most appreciative and grateful for any little kindness we were able to give them in their most tragic and trying circumstances. My heart goes out in sincere sympathy to the friends who lost their dear ones, but it is comforting for them to know they were all buried on the island with military honors due them in giving their noble lives for the cause. May God bring this war to a successful end for the Allies soon and bring back the dear boys serving for their beloved lands and homes again. I know what an anxiety it is for mothers, as my only boy of 20 is on the western front and in the danger zone. I voice your feelings that righteousness and liberty must in the end prevail. Yours, very sincerely,

JESSIE L. CAMERON.

volunteers fired three volleys, which re-echoed against the hillsides. While this was going on, the only photographer within twenty miles photographed the mourners. The ceremony was much the same as that which occurred the day before at the same spot, when 34 Americans were laid at rest in two other graves. (See plates 55 and 56.)

## IN GREAT BRITAIN

### The Sulgrave Institution

In our former Annual Reports we have recorded the purchase in 1914 of the Sulgrave Manor House in Northamptonshire, Eng., the home of George Washington's ancestors, by the British Committee to Celebrate the Century of Peace among English speaking people, as a gift to the American people. The Board of Governors of the property consists of:

American Ambassador to Great Britain, Chairman Ex Officio

| | |
|---|---|
| Mr. J. P. Morgan | Earl Grey, G. C. B. |
| Maj. Gen. Leonard Wood, U. S. A. | Earl Spencer, K. G. |
| Andrew Carnegie, LL. D. | Viscount Bryce, O. M. |
| Mr. Joseph G. Butler, Jr. | Lord Cowdray |
| Mr. T. Coleman DuPont | Lord Shaw of Dunfermline |
| Mr. Robert Bacon | Lord Weardale |
| Mr. John A. Stewart | Mr. Harry E. Brittain |

Mr. Robert Donald

In June, 1917, Mr. Stewart of New York, who is Chairman of the American Executive Committee to Celebrate the Century of Peace, and Chairman of the Executive Committee to Organize and Found the Sulgrave Institution, announced the project for the organization of that institution. He said that the Manor Board, as early as at a meeting in the American Embassy in London on March 9, 1914, had contemplated the eventual establishment of "the Sulgrave Institution" as a substitute for the American and British Centenary Committees.

When the European war broke out in 1914, the Peace Centenary celebration program was necessarily discarded in large part, and the plan to organize the Sulgrave Institution as a permanent monument of friendship was put forward prominently in 1917, after the entrance of the United States in the war, as a measure that could do great good during the remaining period of the great

conflict, and after the war during the period of reconstruction. We are informed that the work of organization has made excellent progress during the past year, notwithstanding the distractions of the war.

The specific purposes for which the Sulgrave Institution is formed are announced to be:

To foster friendship and to prevent misunderstanding among English-speaking peoples;

To inform and instructed our mutual peoples in the arts and practices of peaceful intercourse, for the benefit of our respective nations, and as a help and an example to all mankind;

To encourage, promote and promulgate the basic sentiments of democracy;

To discuss, to comment upon, to elucidate, explain and interpret questions of common interest, in public address and in printed publication;

To bring together into a closer community of interest those societies, associations and general organizations, together with all individuals, that are engaged in any work which tends towards an understanding of Anglo-Saxon-Celtic point of view, culture, laws and related institutions;

To aid in upholding and maintaining the fundamental institutions of the English-speaking world and in fostering the ideals which inspired their creation; and

To maintain buildings, which shall be used as a place of meeting and popular assemblage, as a library, as a repository of memorabilia, of historic relics, etc., and as centers from which can be prosecuted and carried on the work in connection with the above-mentioned objects and purposes.

It is planned, if it prove desirable, that the Institution shall pursue its activities in association with the Board of Trustees of Sulgrave Manor House. It is expected that the principal offices of the Institution will be located in the City of New York, and the city of London, but branch offices may be established in other cities in other countries.

Although it is planned that the Sulgrave Institution shall eventually absorb and supersede the Peace Centenary Committee,

the latter will be continued until statues of Washington and Lincoln are unveiled in London and the Parkman memorial dedicated in Ottawa, to which projects the committee stands formally committed. A statue of Washington, a replica of Houdon's work, has already been prepared under order of the State of Virginia and has long been ready for shipment. It will occupy a site on a vacant pedestal in the northwest corner of Trafalgar Square — and will be presented and unveiled by a committee, of which the Hon. J. Taylor Ellyson, Lieutenant-Governor of Virginia, is chairman, and in association with the Board of Governors of Sulgrave Manor and members of the Sulgrave Institution, at the time of the formal dedication of Sulgrave Manor and its presentation to the People of America.

An offer of a copy of George Grey Barnard's statue of Lincoln, recently unveiled in the City of Cincinnati, has been transmitted by the Centenary Sub-Committee to the British Committee, and by them accepted. The site chosen for the Lincoln statue is at the foot of Whitehall, opposite Westminster Abbey and the Parliament building. The lively controversy over the artistic merits of this statue is mentioned under another head.

### An Appeal for Sulgrave Manor

Under date of May 27, 1917, Mr. H. S. Perris, Secretary of the Board of Governors of Sulgrave Manor, and of the British-American Peace Centenary Committee, issued the following appeal to the people of the United States:

I am writing this from a room in Sulgrave Manor, Northamptonshire — the most interesting spot in England associated with the history of the Washington family, and justly renowned as the "Cradle of the Washingtons."

I have been down here as representative of the owners of the Manor House, the Anglo-American Board of Governors of which the American Ambassador in London is the head, and which includes in its membership some of the most eminent men in Great Britain and the United States.

The outbreak of the Great War in August, 1914, disturbed the careful plans, which — in connection with the projected Celebration of the Centenary of the Treaty of Ghent, and the completion of One Hundred Years of Peace among English-speaking Peoples — had been made for the future of Sulgrave. The Committees

for the Celebration, in London and New York, had to suspend their activities, or rather to postpone them until more favorable days.

Sulgrave, however, has not been neglected during the war. Even amidst the engrossing obligations and duties of the great international struggle sufficient time and money have been found in Great Britain to make the external fabric of the old Washington Home safe and weather-proof, and the domestic quarters habitable for the committee's excellent caretaker, ex-Inspector Pywell, and his good wife. The main work of restoration and furnishing, and the laying out of the grounds, remains to be done, and it is in the hope of enlisting interest and sympathy in an effort in this direction that is now afoot in the United States that I am writing these lines.

What is the use, some reader may ask, of troubling the public with an appeal like this — at such a time? My friend, I have lived, during these last two and a half years, some thousands of miles nearer to the war zone than you have. I am not likely, for a single moment, to be forgetful of its incredible horrors, its far-reaching miseries, its absorbing claims upon our attention, our sympathies, and our beneficence.

But I want you, for a moment, to think of some of the less obvious spiritual claims, the more neglected duties, the less-regarded opportunities, which these great times are laying upon us. Amidst the resounding clash of warlike effort I want to rescue from oblivion and help forward to accomplishment an objective which the teaching of the Great War has made, in my belief, even more sacred and imperative than the Hundred Years of Peace had made it, namely, the bringing into a closer and more sympathetic and intimate accord of the British and American peoples. This great end may be furthered in many ways, it is true, but none of them ought to be allowed to become neglected and weed-grown in days like these, when the yearning after true international friendship, and its worth are being revealed as never before, against the lurid background of war.

The British and American peoples have natural and deep ties which ought to bind them more closely together than almost any other peoples. But this sacred work must never again be left to the hazard of chance or occasional sentiment, whilst, as we have seen, the architects of war are devoting untold labors and incredible sums of money to the propaganda of hate and international mischief-making. British-American friendship must be organized, and its foundations made secure. Men and women of good-will, if they desire it, must work for it, plan for it, pay for it — and think it well worth the utmost payment and toil that they can contribute.

You are presenting us, in Old England, with a monument of your heroic President, Abraham Lincoln, and our Government has given a fine site for it adjoining Westminster Abbey and our Houses of Parliament. Untold millions of Londoners, as they pass it by, will remember with pride the ties that bind them to their cousins and spiritual kinsmen in the great American Republic.

We, in England, have purchased the historic home of the Washingtons at Sulgrave, with its memories dating back to Reformation times.

We want you to help us now, to make of it a shrine of Anglo-American friendship — a meeting place for those who desire to serve this holy cause — a centre whence shall radiate, through many future years, our highest desires and projects for the building of a world better than that we see around us to-day. And when its restoration is complete, we hope to welcome on this historic ground successive generations of American pilgrims, and to renew, in our intercourse, the dreams and visions of a better ordered society of nations.

I have just been walking in Madam's Close, the quaintly-named paddock on the south front of the Manor House. A thrush was singing its spring song from an adjoining coppice. The old gable end of Lawrence Washington's Tudor mansion was before me; and I thought of the times that the old place had seen since the founder placed his family arms of the three stars and two stripes in the spandrel of the arch of that entrance doorway. Whether the world has outgrown the rough barbarities of Tudor days may be a matter of doubt to some — but the best minds in England and America have outgrown them, and it is such minds as these that we desire to mobilize at Sulgrave — and around the historic sentiment that the place represents. Will you not join us in our task? It may be that, through our joint efforts the name and fame of Washington will win fresh victories for the liberties of mankind.

### Barnard's Statue of Lincoln

The offer of generous Americans to give to the City of London a replica of George Grey Barnard's statue of Lincoln which stands in Cincinnati, Ohio, aroused a storm of public criticism directed at the artistic merit and fidelity of portrayal of the statue itself.

It appears, from a statement made by Sir Alfred Mond, M. P., First Commissioner of Public Works in the House of Commons, as quoted in the London Time of October 23, 1917, that the site in "the Canning Inclosure" was originally offered "for a replica of the Saint-Gaudens statue."

The original offer, made in June, 1913, at the close of the visit of a British delegation for the purpose of conferring upon the program for the celebration of 100 years of peace among English-speaking peoples, provided for the gift of a replica of the St. Gaudens statue.

The program, however, was interrupted by the war and the offer did not materialize.

Funds not being available for the Saint-Gaudens Statue, Mr. and Mrs. Charles P. Taft of Cincinnati in 1917 offered a replica of the Barnard statue in that city for the purpose, and the Peace Centenary Committee was the medium through which the offer was transmitted to England. This action of the Peace Centenary Committee was not, however, intended to be an expression of preference for the Barnard statue over the Saint-Gaudens statue, but was taken to give effect to the project to give a statue of Lincoln to London and to avail the United States of the generous offer of Mr. and Mrs. Taft.

During the months of September, October, November, and December, 1917, and January, 1918, the arguments for and against the Barnard statue occupied many columns of the leading metropolitan paper. In a statement in defense of the statue issued by Mr. Andrew B. Humphrey of New York, Secretary of the American Peace Centenary Committee, September 26, 1917, he called attention to the fact that Messrs. Frederick MacMonnies, Charles Dana Gibson, John Sargent, Theodore Roosevelt, and others had praised the work as being the finest of its kind in existence. From a current issue of "The Touchstone," a periodical devoted to art, Col. Roosevelt was quoted as saying:

"At last we have the Lincoln of the Lincoln-Douglas debates. How long have we been waiting for this Lincoln? I feared with the passing of years it would never come, but here it is, the living Lincoln, the great democrat. This statue is unique; I know of no other so full of life. The greatest sculptor of our age has revealed the greatest soul of our age. One is worthy of the other. I congratulate Barnard with all my heart. He has given us Lincoln, the Lincoln we know and love."

John Sargent was quoted in the same article in the magazine as saying to Mr. Barnard of the statue:

"I have no words with which to tell you how much I like your work."

The unfriendly critics, many of whom had seen Lincoln, have declared that the statue is "slouchy," "ungainly," "awkward," "a travesty," "a blunder," etc.

A correspondent, "W. D.," in the New York *Sun* of October 19, 1917, quoted the late Joseph H. Choate as saying, in a letter to Mr. Lincoln's son, that the statue was "horrible." On November 12, 1917, the Council of the National Academy of Design adopted a formal resolution declaring that the statue did not adequately portray Lincoln, and that "this presentation does not convey the recognized characteristics of Lincoln. In it we are unable to discern evidence of his genius or humor or any of those lofty qualities which are invariably associated with his great name."

On December 14, 1917, the Union League Club of New York passed a resolution calling for a public exhibition of the replica so that public judgment might be passed upon it.

During the latter months of 1917, Mr. Howard Russell Butler, Vice-President of the National Academy of Design and founder of the American Fine Arts Society, made a canvass by letter to test the sentiment of prominent men on the subject and sent the results to Sir Alfred Mond, M. P., First Commissioner of Public Works in London, for the purpose of making clear the strong opposition to the Barnard statue in this country and the limited support for the project of presenting replicas of that statue to France and England.

Meanwhile, in October, 1917, Mr. H. S. Perris, representing the Sulgrave Manor Board and the British American Peace Centenary Committee, suggested that there was room in London for two statues, and that those who did not like the Barnard statue might give the Saint-Gaudens work; and on January 1, 1918, Sir Alfred Mond, when informed of the result of Mr. Butler's canvass concerning the Barnard statue of Lincoln, made the interesting suggestion that the best solution of the controversy might be the designing of an entirely new statue, with special reference to the particular site it is to occupy. He said:

"It is not for me to criticize any work of art the American people wish to send us. Our only desire is to have a statue that represents the statesman in a manner acceptable to the donors. I first heard of the Barnard statue from the Secretary of the British Peace Centenary Committee, and, of course, assumed that it was a

satisfactory presentment of Lincoln. Now I hear a great controversy concerning its merits and American opinion seems to be pretty evenly divided. After all, the question is now in abeyance, as it is impossible in war time to provide tonnage to ship the statue over. It should be remembered that the statue, when erected on the site reserved for it, will be in the company of statues of our own distinguished statesmen and should harmonize with them in size. It might be a good thing to design a statue especially for this site."

### Westminster Hall Damaged by Wood-worms

In the fall of 1917, the London Office of Works was obliged to take protective measures with a spraying mixture to stop the ravages of the wood-worm (xestobium tesselatum) in the roof timbering of Westminster Hall. The mixture was composed of cedarwood oil, soft soap, paraffin wax, and certain powerful chemicals compounded by Professor H. Maxwell Lefroy, of the Imperial College of Science and Technology, South Kensington. The insecticide was so powerful that those using it had to wear gas masks. According to Mr. Frank Baines, Architect to the Office of Works, the grub lives only on oak, and it would be possible to bury a man waist deep in some of the holes that it has made in the old trusses of the Hall. This drastic treatment is a last measure of protection, and at present science can suggest nothing further. The roof has been sprayed several times, and it is expected that the plague will now be stayed. Mr. Baines is of opinion that it has been going on 400 years.

### Sir Arthur Herbert Church's Work of Conservation

A small volume* in memory of Sir Arthur Herbert Church, who died May 31, 1915, at Shelsley, Kew Gardens, recalls not only his general services to the world of science, but also his particular services in connection with the preservation and restoration of public monuments. Sir Arthur, who was Professor of Chemistry at the Royal Academy, is best remembered for his researches into the chemistry of pigments and in mineralogical chemistry, although he was also an authority in agricultural chemistry.

* Arthur Herbert Church, K.C.V.O., M.A., D.Sc., F.R.S., F.S.A. Printed for Lady Church for private circulation only. London MCMXVII.

Sir William Crookes, O. M., President of the Royal Society, at its annual meeting on November 30, 1915, referred to the enquiry which Sir Arthur conducted into the condition of the frescoes in the Houses of Parliament and the stonework of Westminster Abbey, in which his artistic and archaeological knowledge were invaluable. On the building of the new Houses of Parliament, well-known English artists, including Maclise, Cope, Dyce, Herbert and Ward, had been entrusted with the painting of frescoes, an attempt being made to revive some of the older methods and also to test certain newer methods for fresco painting. These frescoes had unfortunately deteriorated rapidly, and their examination and preservation were put into the hands of Sir Arthur Church. His reports in four Parliamentary papers on the wall-paintings in Westminster Palace — Cd. 7651 (1895), Cd. 8054 (1896), Cd. 8893 (1898), and Cd. 3085 (1906) — are of great interest.

Sir Arthur Evans, D. Litt., F. R. S., President of the Society of Antiquaries of London, at its annual meeting on May 11, 1916, said that in connection with the antiquities of Corinium, in the Cirencester Museum, of which Sir Arthur Church wrote a Guide, the latter contributed valuable analyses of the pigments used in Roman wall-paintings. In the same way he assisted in the publications of the materials from the Minoan Palace at Knossos by supplying Sir Arthur Evans with a careful analysis of the glaze, composition and pigments of the native *faience* found there. In a communication to the Society of Antiquaries (Proceedings XIX, 131), he threw new light on a class of Cypriote cylinders that had formerly been regarded as haematite, but which he showed to be cast in an imitative paste formed of cuprous sulphide.

Sir Arthur Church united in a remarkable way artistic sympathy and appreciation with scientific genius, and did much to retrieve science from the reproach which it has often incurred in the restoration of works of art.

### Alarm Concerning the British Museum

The announcement of the London *Star* on January 2, 1918, that the government had taken over the British Museum to be used as offices for the Air Board aroused widespread discussion in Eng-

land and the United States. Sir John E. Sandys, Public Orator at Cambridge, wrote a vigorous letter of protest on hearing the rumor of the Air Board's intention. He pointed out that it was impossible to remove more than a fraction of the valuable contents of the Museum and that those which would be left would probably be damaged by ill usage.

Sir John also referred to the fire risk of the new occupancy and said that the building, whose treasures are the envy of Germany, had not as yet been attacked from the air. He feared, however, that when the Air Board was installed there it would be regarded as the legitimate object of an enemy attack.

Several morning newspapers raised an outcry against the reported taking of the Museum. They called it "preposterous," "a serious scandal," "an unjustifiable act of vandalism.

At meetings of the British Academy, the Linnaean Society, the Entomological Society of London, the Mineralogical Society of Great Britain and Ireland, the Essex Field Club, the Classical Association, the British Archaeological Association, the annual Conference of Educational Associations, the Royal Society of Antiquaries of Ireland, the Royal Asiatic Society, the Royal Numismatic Society, the Cambridge Antiquarian Society, and many other representative bodies held in the month of January, 1918, resolutions were adopted remonstrating against the proposed use of the Museum. The remonstrances appear to have been effectual, and at last accounts the Museum had not been taken over for military use.

The principle involved in this proposal is so far reaching and touches so intimately the sentiment in the United States concerning the unnecessary diversion of public institutions from their primary objects, that we quote herewith a very earnest article from "Nature" of January 10, 1918, entitled "National Museums in Peril":

The report that the Government proposed to requisition the British Museum as the headquarters of the new Air Board has resulted in a storm of protest from many men of light and leading throughout the country, and from corporate bodies concerned with the promotion of the intellectual welfare of the nation. The correspondence published in the *Times* and other journals represents only a small fraction of the budgets received, and it is evident that

the Government will bring upon itself nothing but obloquy if it persists in the action contemplated. Since we referred last week to the projected dismantling of the galleries at Bloomsbury, it has been made known that the Office of Works has surveyed the Natural History Museum at South Kensington with the view of using the building for the purposes of other Government departments, and has reported in favor of doing so. The very existence of our two greatest national institutions is thus threatened, unless a united effort is made at once to convince the Cabinet of the unnecessary and ruinous proceeding to which certain administrative officials, with the usual indifference to scientific interests and inability to understand scientific values, desire to commit it.

The high-handed method adopted in the proposal to commandeer the two museums cannot be justified even by the provisions of the Defence of the Realm Act. Sir Arthur Evans states that the trustees of the British Museum were not consulted upon the matter, though they are responsible for the collections, not as Government nominees, but under an Act of Parliament. They were astounded upon receiving from the Air Board a requisition for the building to house the Board's establishment, and at once sent a strong protest to the Government against the scheme. Even an enemy invader could not adopt a more arrogant attitude towards the trustees than that shown by the representatives of the Government. The collections were regarded as so much furniture which could be packed up in a few days by workmen and conveyed in pantechnicons to convenient places of storage until after the war. As "A Londoner" writes in the *Times* of January 4 in an attempt to justify the official attitude: "It is pretty widely understood that the Air Board is willing and anxious to put its large resources in transport and labor at the service of the nation for the removal of the contents of the British Museum to places of safety which the Board has already inspected and approved."

This semi-official pronouncement reveals entire incapacity to appreciate the difficulty of the problem of dealing with the contents of the museum. The whole of the objects are considered as goods which may be removed in a few days and returned without detriment at a later period of reconstruction. Because a selected number of objects have been carefully transferred to places of security by museum officials during the past two years, as a precaution against air-raids, it is assumed that the whole may be dealt with summarily by energetic workmen under the supervision of experts. The absurdity of this view will be manifest to anyone acquainted with museum work. To make a selection of fragile objects and other national treasures, and to take measures to preserve them from damage, are very different matters from that of

clearing space without reference to what it occupies. It is certain that if the indiscriminate and hurried dismantling of the museum is proceeded with, many of the objects taken away will never be worth bringing back, and it would be just as well to make a bonfire of them at once.

Only a small proportion of the contents of the museum could be removed in time for the space they occupy to be of any use to the Air Board. The library must remain, and the large sculptures, including the more important pieces of the Elgin marbles, the Assyrian bas-reliefs, and the Egyptian statuary. The ethnographical collections cannot be disturbed without certain destruction of many objects. The glass, pottery, porcelain, and *faience* collections, the ancient and medieval gems, rings, and jewelry, the Greek vases, the Babylonian clay tablets, the Egyptian pottery and images, the terra-cottas, the bronzes — all these can be moved only with an infinitude of skilled handling and packing, and in a period of time which might well run into years rather than months. No, it must be clearly understood that if the museum is to be taken for the Air Board — which needs offices quickly — the Board will have to be encamped in the middle of the collections, with all the increase of risk which such an encampment involves.

Our concern for the museum is not prompted by opposition to interference with the existence and work of the threatened institution, but by the desire to preserve national prestige and to prevent the ruin of possessions which can never be replaced. Only if reduced to the last extremity — and we are far from that condition — should a scheme be adopted which would give the enemy occasion to scoff at our willing sacrifice of the glorious heritage represented by the collections in the national museum.

"We profess to feel shame and anger," says Sir Henry H. Howorth, "and also terror for the future of our race, when we find the champions of German culture destroying Rheims and Padua and Ypres. We call them Huns for their pains, and at the same time in another way, and for no urgent military purpose, ourselves put in jeopardy the noblest collections in the world of art and natural science, which neither money nor skill can replace, and which form the most valuable asset of the country if its mental and moral training are to count in this Armageddon of materialism."

The *gravamen* of the case against the proposed action is, indeed, that it shows a total lack of imagination and of perception of the value of intellectual studies on the part of responsible Ministers. They accept lightly, and without investigation, a proposal which, on the face of it, imperils the inestimable treasures of the British Museum. They do not consult the trustees as to the effect of their

proposed action. They do not give heed to their own Minister of Education. They simply accept a scheme put forward by the First Commissioner of Works, who avowedly has not visited the museum to investigate its practicability, and whose expert advisers had on two previous occasions reported that the museum was not suitable for a public office. All this shows an indifference to things of the mind and a materialistic spirit which are of evil omen in statesmen whose business it is to maintain the ideals of the country at a high level, and thereby to hearten it to bear the strain of war. Who is to believe them in future when in their speeches they make play with Germany's crimes against civilization, or exalt our ideals in comparison with German Kultur? They are lowering the pitch of England's endeavor, and the misfortune is that they do not realize that they are doing any harm in this action. If the members of the Government could be brought to face these facts, it is difficult to believe that they would continue to insist on a policy which is bad for the Air Board, bad for the museum, and a discredit to the country.

Though the spontaneous outbursts of indignation from all parts of the country may yet induce the Government to withhold the impious hand which the Office of Works laid upon the collections and buildings of the British Museum at Bloomsbury, the fate of the Natural History Departments at South Kensington also trembles in the balance. Yet the arguments drawn from unsuitability of structure and fragility of irreplaceable specimens are here no less strong, and they are reinforced by two others. The work in all the Natural History Departments bears directly on the material as well as on the intellectual life of the nation — indeed, on its very existence. Those who say that prosecution of the war must come first should be the first to insist on the continuance of the great help rendered by the museum to all branches of our fighting forces: We may refer them to an article in the *Times* for January 5. To stop this work for the convenience of the Registry of Friendly Societies would be a fine stroke for our enemies. Secondly, the objects in the Natural History Museum form the historical basis on which a great part of natural science rests; they are the standards to which present and future generations must continually refer. To destroy or damage them is to cut away the ladder on which we climb. The distinguished men responsible to the nation for the safety of its unique possessions — trustees, indeed, for the whole world now and to come — have already taken steps against possible attack by the enemy, while leaving the specimens available for accredited investigators. But they cannot prevent the certain destruction and widespread confusion that would result from a sudden clearance of more than half the build-

ing as though it were just a mammoth hotel. The removal from Bloomsbury took more than three years, yet, for all the care with which it was accomplished, it left damage which is not yet, and can never be entirely, repaired. When we think of the subsequent growth of the collections and the present depletion of an always insufficient staff, our imagination fails to grasp the threatened ruin. Generations could not restore it. For many a year the science of our country would be hampered.

In the early days of the war we had to fight for our national museum, and well was it that we won a partial victory. Since then the members of the staff unfit for military service have carried on, with what good results a few bald statistics will show. During the past year the Natural History Museum has been consulted by at least fourteen Government departments, as well as by numerous individuals engaged in war-work. The number of visitors, which in 1916 was more than 402,000, was increased in 1917 by 20,000; among these are soldiers receiving class-instruction in sanitary, veterinary, and other subjects. The annual number of acquisitions has decreased, because all purchases are stopped, but donations continue to flow in with a volume that seems to grow rather than diminish. Among these accessions have been thousands of specimens of the highest scientific importance. The dismantling of the museum would make the receipt of donations impossible, and the stream would be diverted elsewhere. In some cases it would never return.

"We are blamed," says the Government in effect, "for commandeering hotels; we must have places for our young officers to dine; do you expect us to oust another political club? We preach economy; do let us practice it for once. We can get the museum rent-free." Rent-free, indeed! Is the cost of structural alterations, of packing, of removal, and of restoration not to be paid for? Does the scientific help for our food-producers, our industrial lists, and our fighting or wounded men weigh as nothing in the balance? Are the gifts which you reject devoid even of pecuniary value? "What should ye do, then? Should ye suppress all this flowery crop of knowledge and new light sprung up and yet springing daily in this city? Should ye set an oligarchy of twenty engrossers over it, to bring a famine upon our minds again, when we shall know nothing but what is measured to us by their bushel?"

"Milton!" we cry with Wordsworth:

"Milton! thou should'st be living at this hour:
England hath need of thee."

### Preservation of Tattershall and Bodiam Castles

From correspondence with Lord Curzon of Kedleston, Lord President of the Council, we have learned with pleasure during the past year of his very valuable work in preserving two of England's ancient landmarks, Tattershall castle in Lincolnshire, and Bodiam castle in Sussex.

The famous red brick keep of Tattershall castle, with its historic mantlepieces, was purchased and restored by Lord Curzon a few years ago after its movables had been stripped out for transportation to America. This valuable pile, which has thus been saved for the use and enjoyment of the nation, dates from about the year 1440.

With a similar object, Lord Curzon recently purchased Bodiam castle, which dates from 1386.

Writing of these acquisitions to the President of this Society, under date of "1, Carlton House Terrace, S. W. 1, January 15, 1918," Lord Curzon says:

"The two together provide a worthy monument of the architecture and manner of life of the later feudal age in England. It is my belief — as I am sure it is of your Society — that such objects are a part both of the national heritage and of the spiritual life of the nation implanted in the people who see in them not merely an interest in the past or the historical sense, but a love of the picturesque and beautiful and a reverence for what is splendid and venerable."

The Rev. Theodore Johnson, vicar and rector of Bodiam, has written a very interesting monograph entitled "The History of Bodiam, its Ancient Manor, Church and Castle," compiled from ancient sources. The booklet, 4⅞ by 7¼ inches in size and containing 56 pages, is profusely illustrated.

The plan of the castle is almost a square, measuring a little more than 150 feet in one direction and a little less than 150 feet in the other. At each of the four corners is a circular tower, having an outer diameter of 28 feet 9 inches and a height of 61 feet 6 inches. On each circular tower is a turret rising 14 feet higher. The curtain walls connecting these four towers are strengthened by five square towers. Two of them flank the main entrance in the middle of the north side, and there is one in the

middle of each of the other three sides. The square towers are all 40 feet 6 inches high. The castle is surrounded by a moat which is one of the largest in England. It measures 540 feet from north to south (more than two New York City blocks and included streets) and 350 feet from east to west. It is from 5 to 10 feet deep at the present time, and was probably deeper in ancient times. All the space between these two outer dimensions and the castle walls is filled with water. The parapets of the walls and towers are machicolated and the walls themselves pierced with narrow loopholes. Drawbridge, barbican and portcullis are features of the main entrance.

Within the parallelogram enclosed by the castle walls were various buildings, forming a smaller parallelogram, abutting the curtain walls on one side and facing an open inner court on the other. Many of these buildings are still standing.

The plan of this castle followed the manner of building castles in France — upon level ground and protected by a moat. From the middle of the 13th century the parallelogram was the popular ground plan, with massive circular towers at the angles and square or oblong towers in the curtain walls, like Bodiam. Mr. J. Tavenor Perry says that Bodiam castle is a stronger and larger model than Villandraut, near Bazas, in France, and not a copy of Derval, in Brittany, as sometimes stated.

Bodiam Castle, as it now exists, was built on the site and foundations of an Anglo-Saxon stronghold known as Bodiam Manor. It was erected in 1386, by Sir Edward Dalyngruge, who had served under Sir Robert Knollys at the battles of Crecy and Poictiers. Sir Edward had amassed a very large fortune by means of plunder and by the exaction of ransom for captives during the wars in France. He devoted a portion of his gains to the building of this castle on the banks of the river Rother, and it is thought that the castle must have suffered from damp by reason of the proximity of the river and the depth and size of the moat by which it is surrounded; for a writer in an American paper says that he has never known any medieval stronghold that can show so many chimneys. Indeed, the castle, when still in habitation, must have been wonderfully well heated.

The castle was used as a fortress in the revolutionary wars of the seventeenth century, and Cromwell's generals, notably the Roundhead Commander Waller, attempted to dismantle it by destroying the floors, the roofs and the staircases, and even by hurling some of the stonework into the moat, from which it was recovered and replaced by Lord Ashcombe, a former owner. Lord Curzon's work of restoration now makes it one of England's most notable historic monuments.

### Pocahontas Memorials at Gravesend

One of the picturesque figures in the history of the settlement of North America by the English is Pocahontas, the Indian princess who saved the life of Capt. John Smith in Virginia, married John Rolfe of the Jamestown colony, went to England, and died at Gravesend on March 21, 1616, on the eve of her return to America.

In plates 53 and 54 we give pictures of memorials erected to her memory in St. George's Parish church, in Gravesend, in the chancel of which her remains were buried. Plate 53 represents the interior of the church and the two memorial windows presented by the Colonial Dames of the State of Virginia. The windows were dedicated on July 16, 1914, when they were unveiled by Hon. Walter Hines Page, the American Ambassador to Great Britain. Plate 54 represents the memorial stone which was erected in the church and which recites the principal facts of her history. This inscription is in error in stating that Pocahontas married Thomas Rolfe. Her husband was John Rolfe.

## IN FRANCE

### American Soldiers Fighting for Freedom on French Soil

The one superlative fact in American history of the past year is that American soldiers have gone to France to fight for freedom and civilization and are suffering and have died in the great cause of humanity for which the Allies stand.

France has always been very dear to the United States, but she is dearer now than ever. Our earliest authentic history goes back to France, for it was Verrazzano, sailing under commission of Francis I, who first gave an intelligible description of the United

States coast from personal observation. It was he who, first of Europeans, visited New York harbor, and bestowed upon the harbor, the great river which flows into it, and the country round about, sweet-sounding French names.* France first preached the gospel in New York State, France first described our Niagara Falls, France first explored our great West, France sent Lafayette, Rochambeau and De Grasse to help our forefathers win their independence, France made easy the building up of our continental empire by facilitating our acquisition of Louisiana,† France has inspired American art and literature. For these and many other reasons we have been closely drawn to France in years gone by; and in the last three years she has been the object of both our deepest sympathy for her suffering and exalted admiration for her fortitude.

But now, a new tie binds us. Our heroes sleep in French soil, beside those of our other allies, drawn and bound together in an unprecedented brotherhood.

Events have moved rapidly since we began to write the opening pages of this Report (pp. 15–33), and as we are about to transmit this document to the Legislature our troops are moving rapidly to take part in the crucial events of the great struggle on the west front. The location of American troops has been greatly extended, and the Toul sector no longer monopolizes their activities. At the date of the transmission of this Report to the Legislature (April 12, 1918) we know that our troops are on the battle-front at six different points. These locations, named in geographical order from west to east, are (1) on the Aisne sector northeast of Soissons; (2) in the Champagne about midway between Rheims and Verdun; (3) on the Meuse heights, between Verdun and St. Mihiel; (4) just east of St. Mihiel on the southern side of the St. Mihiel salient; (5) on the Lorraine front east of Luneville; and (6) in Alsace, across the German frontier, about opposite Belfort. The limitations of military censorship still prevent a detailed description of these localities, but glorious history is in

* See "Giovanni da Verrazzano and His Discoveries in North America 1524" in our Annual Report for 1910, pp. 135–226.

† Then a vast region extending from the Gulf of Mexico to Canada, and from the Mississippi to the Rockies.

the making, and we can with patience await the details, confident in the ultimate victory.

### Firing the First American Shot

The first actual and the first official participation of Americans in warfare on the front in France occurred at very different times. Before the United States formally recognized the state of war with Germany, Americans were serving in the allied infantry and air service under the flags of our allies. And an American flag was carried personally by an American fighting with the Canadians on Vimy ridge. The first shot by the regular American forces under our own flag, however, was fired on October 23, 1917, and was announced October 27. The precise point at which the event occurred is not stated, but it was on the American front which was then north of Toul. The shot was fired from a French "soixante-quinze," or "75," equivalent to the old American three-inch piece. The men dragged the gun by hand several miles to the trench to make the shot. The shell-case was saved to be presented to President Wilson. Soon after the shot was fired, the gun was photographed. Upon it was an improvised placard, consisting of a board upon which was written with chalk: "First shot fired at Huns, 23,10,17." The figures are the French method of expressing 23d October, 1917. A picture of a French "75" is given in plate 57.

Reference to the first American soldiers to be killed in battle is made under the heading "The Care of Soldiers' Graves," pp. 465–472.

### Vandalism of the Modern Huns

Strictly speaking, it is a mixture of metaphor to speak of the Vandalism of the Huns. The original Vandals and the Huns were different tribes, but their ruthless destruction of human life and property places them in the same category and to speak of the "Vandalism of the Huns" in its modern application is an employment of reduplication of meaning to express in a more emphatic way a form of brutishness which combines that of both the Vandals and the Huns of the fifth century.

The Vandals who in the fifth century made their name forever the synonym for frightfulness were a Teutonic race who first appear in history settled in the northeast of Germany in the region

between the Vistula and the Oder. Many Vandals fought under the banner of Attila, king of the Huns.

The Huns — a name self-chosen by the modern Germans — invaded Europe from Asia, and under Attila extended their dominion over the people of Germany and Scythia from the Rhine to the frontiers of China. It is an interesting coincidence that when in 451 Attila invaded Gaul, his triumphant career received a check by defeat on the plain of the Marne — anciently called the Catalaunian Plain — in what old historians accounted "the bloodiest battle ever fought in Europe."

The name Hun, as applied to the modern German, had its origin at the time of the Boxer troubles in China. In his farewell address to his expeditionary army at Berlin, on the day on which they started for Peking, the Kaiser, as reported in the "Illustrirte Zeitung" of August 2, 1900, said:

"You know well you will fight against a treacherous, brave, well-equipped, cruel enemy. When you shall meet him, remember, quarter is not to be given, prisoners must not be made, use your weapons so that for a thousand years to come no Chinaman will dare look askance at a German. Preserve your manly discipline. The blessing of God be with you. The prayers of an entire people, my wishes accompany you, each single one of you. Open the way for Kultur once for all! Now you may go. Adieu, comrades!"

Letters subsequently written home by the German soldiers in China were read aloud to the German Reichstag by a member, Herr Richter. When reading them Richter called them "Hunnenbriefe," or "Letters from the Huns."

The original Huns were a dark-complexioned people, deformed in appearance and with uncouth gestures and shrill voices. Gibbon, the famous historian, gives a curious legend concerning their origin:

"They were distinguished from the rest of the human species by their broad shoulders, flat noses, and small black eyes deeply buried in their heads; and, as they were almost destitute of beards, they never enjoyed either the manly graces of youth or the venerable aspect of old age. A fabulous origin was assigned worthy of their form and manners — that the witches of Scythia, who for their foul and deadly practices had been driven from society, had united in the desert with infernal spirits, and that the Huns were the offspring of this execrable conjunction."

The destruction by the Germans in the war zone in France and Belgium falls into two classes, between which it is sometimes difficult to distinguish, namely, that which is unavoidable in military operations, and that which is purely deliberate and unnecessary for military purposes except as the brutal desire to strike terror into the Allies may be construed by the Germans as military necessity. There are many evidences of the wanton and deliberate violation of tombs, destruction of works of art, demolition of cathedrals, churches, and private domiciles, cutting down of shade and fruit trees, etc., etc., which can be interpreted only as the expression of uncontrollable brutal rage or coolly calculated fiendishness.

Mr. Dana Burnett, under the heading of "A Caliban Hand on France," in the New York Evening *Sun* of February 2, 1918, gives a story illustrative of the German spirit of destructiveness. He says:

During the Hindenburg strategic retreat it was decided to lay waste certain towns and villages. In one of these towns, which we will call X, the labor of destruction had been intrusted to a young German officer, who justified amply the confidence reposed in him. With a squad of men he went from house to house, studied the premises, calculated the amount of explosive needed to blow up the building, then with true German economy laid just the proper charge. When the order came to evacuate the town he simply marched through the streets — oh, tragic ridiculous figure strutting down the ages!— and touched off the fuses.

A woman, forgetting all danger, forgetting everything at the sight of her home being toppled into the street, cried out to the young officer:

"Why do you destroy innocent houses?"

He turned — may history behold him! — and replied in pompous, imperfect French:

"We do so, madame, in order that you will respect us!"

The cutting down of the apple orchards of France recalls a special injunction of the Scriptures against such a crime. In Deuteronomy, XX, 19, it is written:

"When thou shalt besiege a city a long time in making war against it to take it, thou shalt not destroy the trees thereof by forcing an axe against them; for thou mayest eat of them and thou shalt not cut them down (for the tree of the field is man's life) to employ them in the siege."

### The Burning of St. Quentin Cathedral

The tale of German destructiveness is told along the whole war-zone in Belgium and France in obliterated villages, ruined churches, cathedrals and chateaux, pedestals robbed of their bronze statuary, belfries deprived of their bells, mansions looted of their contents, etc., etc. A mere list of these would fill a volume.

Among the great ecclesiastical monuments to suffer in 1917 was the Collegiate church in St. Quentin called the cathedral. This was burned on August 15, 1917. The town was in possession of the Germans and a Berlin despatch reported that the cathedral caught fire from the flames of the presbytery which was set on fire by French shells. An observer on the French front, however, denied that French guns were responsible, saying that August 15 was relatively calm on that sector and there was little bombardment when the fire broke out.

Smoke and flames began to appear issuing from the cathedral about sun-set. All night the great building flamed, and when day broke it was seen that the massive roof had fallen in, carrying with it the central tower. Smoke and flames continued to issue from the building until late on the 16th.

On August 19, the allegation of the Germans that the French set fire to the cathedral was denied by an official French statement. The German communication, it declared, was meant to conceal a fresh atrocity, as the Germans long ago decided to destroy the cathedral, affirming some time ago that French incendiary shells had struck the cathedral and the Palace of Justice and the Museum. When on July 9, 1917, the German press announced damage to the cathedral by the French artillery, the French high command published orders against firing on the city, especially on the cathedral, and ordered that only the northern part of the city and the suburbs be shelled. After this order was issued fires and explosions were of daily occurrence in the city. Under direction of Lieutenant Baron von Hadeln, art historian attached to German headquarters, the cathedral was stripped of its stained glass, the choir transept, the Gothic rose windows, and statues.

The French announcement concluded with the statement that "if the Germans cast at us the imbecile accusation of destroying a glorious part of our national patrimony, it is because they wish

to justify their destructions at Rheims, Soissons, Ypres, and Arras."

The church was a fine speciman of Gothic architecture dating from between the 12th and 15th centuries. Its nave is 370 feet long and 130 feet high. It was beautifully decorated and contained some handsome bas-reliefs. In the crypt of the church are buried St. Quentin and his fellow-martyrs, St. Victorious and St. Gentianus.

### Rheims Cathedral a Beautiful Monument to Frightfulness

Rheims Cathedral, which Mr. Dana Burnett calls the "world's greatest monument to frightfulness," has suffered repeatedly since September, 1914. This mutilation of Rheims is unjustified by military reasons, as the cathedral has not been used for military purposes except that on the first night of the reoccupation of Rheims by the French, a searchlight was placed on one of the towers. This was promptly removed, however, and the enemy notified to that effect. As a further evidence of the harmlessness of the cathedral, it was devoted to the care of German wounded, and the Germans were also notified of that. Nevertheless, the cathedral has been shelled periodically ever since. Early in March, 1918, the Germans fired again on the cathedral, and on March 11 attempted to justify the act by declaring that the cathedral was being used for observation purposes. On March 14, Cardinal Ludovic Henry Lucon, Archbishop of Rheims, issued a protest against an assertion in the German official statement. The Cardinal said:

"There is not nor has there been previous to the German entry into Rheims on Sept. 4, 1914, either optical, wireless, or any military installation on the cathedral that might have been mistaken for an observation post. Lately a few workmen have been employed on conservation labor there. Until last spring no work of preservation had been undertaken, in order to avoid giving the enemy artillery an excuse to fire on the cathedral. The April, 1917, bombardment caused such grave damage to vaults and windows that visitors expressed much astonishment that nothing had been done to save the remains of windows and paintings. A small number of men were set to work in May, 1917, to save the remaining fragments of the thirteenth and fourteenth century stained glass. They are now bricking up the remarkable statue of Eve

situated at the summit of the north transept, but are making no effort to conceal themselves so that the enemy can plainly see the nature of the work that is going on. The interior clock has been taken down and the organ removed."

The French General commanding at Rheims confirmed the foregoing, adding that there were no French cannon within 800 metres of the cathedral.

As to the condition of the cathedral, Mr. Wythe Williams, telegraphing the New York *Times* of May 15, 1917, from Paris, said:

"I have just visited Rheims in company with Mr. Whitney Warren. For three hours we wandered undisturbed and unaccompanied through the magnificent ruin, taking dozens of photographs, Mr. Warren making minute comparisons of the present condition with that of the time of his last visit six months ago. In summing up his findings, Mr. Warren said:

"The cathedral is now in grave danger of total destruction. In the recent bombardment seven of the flying buttresses were shot away, so that the walls, particularly those of the transept, are so weak that just one chance shot would bring all that portion of the building tumbling down. The walls are full of cracks, and are really just hanging together, depending only on the thin iron supports inserted through them. Considering the entire cathedral, I would say that probably three such chance shots or possibly half a dozen would raze it to the ground.

"With the loss of the flying buttresses the pressure of the other supports has become so great against the other walls that they are bulging out. New cracks are appearing constantly, so that the vicinity of the cathedral is very unsafe. It could be saved if no more shells hit it. I don't mean it could be restored. It is too badly smashed ever to be restored, except in spots. What I mean is it could be preserved as it is — a wonderful and inspiring ruin, quite as magnificent in its way as the Roman Colosseum. No matter what further destruction occurs it seems to me it should be kept simply as a ruin to let the whole world see throughout all time what savages the Germans really are. Even to preserve it would be a difficult task, but nowadays it is possible to preserve almost anything, and I believe a temporary support could be installed, both inside and outside the walls, that would prevent them from falling until they could be sufficiently strengthened and again made intact. However, the Germans are probably able to prevent the building being saved, as they seem intent on its total destruction.

"Since I was here the last time I should say its condition is over 50 per cent worse. The whole exterior is now too badly scarred for any modern restoration to make anything of it. The magnificent hauts reliefs of the fourteenth century that covered one entire interior end wall are by some miracle still half intact. They are the most unique treasure of the cathedral. There is nothing like them any place else in the world, but, alas, they cannot be removed as they are carved out of the cathedral itself. I am glad to see the authorities are now building a thick brick wall covering them, but inasmuch as the Germans have lately been sending more shells of 380 millimeters into the building it will be more than a miracle if they escape.

"Of course it is simple to see that the German statement that the cathedral has been shelled because it is used as an observation post is only another of their lies. The cathedral towers are about 80 meters high, and you can count about sixteen French observation balloons hereabouts that are at least 300 meters high. What good would the towers be as an observatory? Also the Germans cannot truthfully charge they are firing at the cathedral to destroy French batteries because you can easily determine, and so can they, that there is no French battery within a mile of it. Also they lie when they say that the shells hitting the cathedral have been accidental and that they didn't really mean to hit it because, as you can also easily see when approaching Rheims in the distance, the cathedral looms above the town as big as an elephant in a backyard. No, the Germans are ruthlessly destroying this great work of art because they are what they are — that is to say, because they are Germans, just Germans — there is no name to call any one that could be worse."

The interior condition of the cathedral is now so bad it is impossible to keep the rubbish cleared, as was the case up to a month ago, when visitors were constantly taken there. Then there was only one hole in the roof, but now there is a succession of great holes and fissures joining them, so that the floor is in places five feet deep with crumbled masonry. The high altar has totally disappeared and the priceless stained glass of the windows has now all gone.

"The greatest miracle of all is that the building has resisted destruction so long," Mr. Warren explained. "It is only the great thickness of the walls and the stone arches of the roof that have saved it from falling long ago. During the period of the war preceding the great allied offensive in April it is estimated that about 30,000 shells fell on the city and church, but during the "spite

bombardment" that followed the offensive 20,000 shells of all sizes were rained on the place during a period of eight days; and even yesterday while we were there the destruction was still going on, shells constantly falling in all parts of the city. We had ample proof of the size of the shells deliberately hurled at the cathedral when in the midst of a pile of crumpled masonry under the transept we came upon an unexploded shell of 380 millimeters."

As to the future of the cathedral, many suggestions have been made. One group of men proposed in December, 1917, that German prisoners be sentenced to labor for life in rebuilding the cathedral. Mr. Dana Burnett hopes that the cathedral will not be restored. He says in the New York Evening *Sun* of January 3, 1918:

"What plans there may be for the future of Rheims Cathedral I do not know. For my own part I hope that it will not be 'restored.' As it is to-day it constitutes one of the chief treasures of the civilized world. It was here that King Clovis was baptized; here that Jeanne d'Arc crowned Charles VII. But, more important, more significant to the glance of history, is the fact that here the Philosophy of Frightfulness ignominiously and completely failed of proof!

"I beg leave to translate what Cardinal Lucon has written in the interesting Book of Rheims:

"'The Cathedral of Rheims is the sanctuary of the baptism of Clovis, the triumph of Jeanne d'Arc and the consecration of the Kings of France. The (present) devastation is an unprofitable stroke that has aroused the indignation of the entire world. Rheims will arise from her ruins! The wounds which she has received and of which she retains the ineffaceable scars will render her dearer than ever to all French people, to all religious men and to all lovers of that which is great and beautiful.'

"Before the war the Cathedral of Rheims belonged to France; to-day it belongs to all the world."

### The Restoration of Ruined Towns and Monuments

In anticipation of the end of the war, movements have already been inaugurated under American auspices for aiding the French to rebuild their towns and restore their great architectural monuments.

The problem presents itself in three aspects:

First, the rebuilding of the homes in which the people lived;

Second, the renovation of the blasted fields so that agriculture may be resumed; and

Third, the restoration or replacement so far as practicable, of the ruined architectural monuments and works of art.

Already the work has begun under the first two headings. At least temporary provision is being made for the shelter of the villagers who have been able to return to the sites of their old homes, and already the planting of new orchards in some of the devastated districts has begun. Miss Anne Morgan has been very active in this field. Her work is described at length in the New York *Evening Sun* of February 15, 1918. Miss Morgan and Mrs. A. M. Dike went to France in May, 1917, to see how the 500 or more American branches of the Fund for the French Wounded could best put its resources at the disposal of the French nation through its civilian relief committee. She then saw the urgent need for providing for the refugees returning to their old villages and lands. Their work in 1917 was largely in the vicinity of Blerancourt, where 28 villages were visited, and the vicinity of Soissons, where nine others were visited. Miss Morgan says that she and her associates found great difficulty in persuading the returning villagers to use the demountable wooden houses supplied by the French government.

"These wooden houses are bought by the refugees who go back to devastated regions, and they are credited 70 francs or so against their share of the French war indemnity. In this way the people are helped out of their troubles immediately by the indemnity which the people in the untouched parts of France pay for by taxes. France believes in distributing equally the burden of this great national suffering. The man in the south or the west pays over a few more centimes or sous, and a widow and her fragment of family back of the Aisne step into a reconstructed shed or a wooden house, and face life anew."

Speaking of the cultivation of the soil, and the need of agricultural implements, Miss Morgan says:

"The land has to be ploughed and we need tractors and people to run them — and the trees are completely gone. We have planted 7,200 fruit trees, 1,000 to a commune, and we have trans-

planted from other parts of France trees similar to those which have formerly grown there, so that the people do not face unfamiliar orchards.

"It has been hard to get tools, for the Germans in their retreat destroyed not only all the implements, but the same parts in each plough and sower, so that one could not be repaired from the other. The French government has a wonderful system whereby all these injured tools are reclaimed and numbers of them have been repaired and put back into use."

Miss Morgan is now endeavoring to secure from America plough girls, skilled agriculturists, young women who can drive tractors and know about soils and trees, who will volunteer to help with next season's crops.

Another movement for succoring the French is represented by the French Restoration Fund, Inc. Mrs. Cecile Sartoris, wife of Algernon Sartoris, grandson of General U. S. Grant, spoke on this subject at the annual meeting of the American Scenic and Historic Preservation Society held at the American Museum of Natural History in New York City on January 17, 1918.

Mrs. Sartoris, whose home is in France, came to the United States in the spring of 1917, in the interest of French restoration, and the response to her inquiries in all parts of the country was so encouraging that upon her return to France she was able to inform the French Government that Americans were willing and eager to open their purses to the stricken inhabitants of their sister republic. Following her visit to America, Mrs. Sartoris, Countess Regis de Oliveira, Mr. Charles F. Beach and Mr. Frederick Matthews, all voluntary workers, were sent on two visits through the devastated area in order that first-hand information of conditions there might be collected and plans for the most immediate relief might be outlined. She came again to America on this mission in January, 1918. In a statement furnished to this Society as well as to the press, Mrs. Sartoris said:

"We made our first trip in July, 1917. The sight of village after village, completely destroyed, was most depressing, and our task of building up this vast expanse of waste land, once so beautiful, seemed very hopeless. But after more carefully examining the ruins we found that much of the old material could be used again, and that in this way the first great problem could be solved.

When the Germans evacuated the villages, they hastily destroyed the houses by placing dynamite in the cellars. The explosion would demolish the center of the house and blow off the roof, but the stones in the outside walls would only be dislodged and comparatively few of them have been broken. In the beginning we had been told of the scarcity of materials and the difficulty of transporting them at present, and we are planning at first to construct the crudest houses for the use of the people until others could be had.

"Both the northern and southern regions were visited by us and, following our second trip in November, 1917, we were able to report to the French Government and the committees interested in the work on several towns where the greatest needs arise. Our aim has been to select the most fertile area, so that it may be made productive by spring. We also centered our interest around the villages safely away from the theatre of war, and now that we find that such quantities of the old building material can be used again, we will be able to erect permanent dwellings at the outset, thereby saving a great amount of time and labor.

"It is our plan to have these war-ridden towns adopted by American cities, and to this idea there has been an immediate response from the American people. Their interest in the work from the time of my first trip over here has been most gratifying and has done much to keep up the spirits of the thousands in France who are in such desperate straits. Already I have heard from Washington, which has shown a great interest in restoring Noyon; Detroit has chosen Soissons, and Chicago is raising a fund for the restoration of Rheims. Other clubs and associations have expressed a desire to select an individual house, school, public building or institution. We also plan to have bricks made by wounded French soldiers sold here and the money used for the purchase of building materials, so that those who are unable to contribute large sums may still be able to help.

"We are going to begin our work in the central and northern part of France in order to help relieve the south which is growing so congested. We found conditions on the border of Switzerland particularly distressing. It is there that the prisoners, who were carried off by the Germans when they retreated, are being returned at the rate of 1,000 a day. These poor people are sent by the Swiss Government to Ferney, near Geneva, 500 in the morning and 500 at night. They are fed in this quaint little town by the officials, and then the task of placing them arises, for it is impossible to keep them there for more than a few days. They have a wonderful system which was instituted soon after this influx of prisoners began, but even in carrying it out there is bound to be

some delay. It is this — when a person is missing and is supposed to be among the prisoners taken to Germany, his more fortunate friends or relatives send his name to Ferney, agreeing to claim him as soon as he reaches there. Among those who have agreed to help are many soldiers, so naturally after several months have elapsed the safety of the benefactor is rather uncertain. In such a case the person must remain at Ferney, a charge of the Government, until an investigation is made. With the restoration of the villages by us these people with no one to claim them may be sent to homes built by the American people who will help to give back to the stricken people of France the homes that were theirs before the coming of the Huns."

A French restoration movement has also been organized by the New York American, New York Journal and other newspapers of William R. Hearst in Boston, Atlanta, Chicago, San Francisco and Los Angeles, along lines similar to those above mentioned.

### Battle of the Marne Monument

On November 3, 1917, announcement was made in New York City that a committee of prominent citizens had proffered to France a monument to commemorate the battle of the Marne; and on February 8, 1918, at Paris, Foreign Minister Pinchon notified the American Ambassador, Hon. Wm. G. Sharp, that the French cabinet would accept the gift. M. Pinchon said the Ministers had expressed a preference that the monument be erected at one of the points on the battlefield which have been selected in connection with the government's plan for special designations of certain sites to commemorate the battle.

The American committee making this offer includes the following ladies and gentlemen:

Thomas W. Lamont, Chairman

| | |
|---|---|
| Ogden Armour | Mrs. Wm. Astor Chanler |
| Gertrude Atherton | Frederic R. Coudert |
| Robert Bacon | Paul D. Cravath |
| George F. Baker | W. H. Crocker |
| Walter Berry | Mrs. Wm. Adams Delano |
| W. P. Bonbright | John H. Finley |
| James Brown | Charles L. Freer |
| Nicholas Murray Butler | Walter Gay |
| Henry W. Cannon | Mrs. John L. Gardner |
| John Ridgely Carter | H. H. Harjes |

Thomas Hastings
Myron T. Herrick
John Greer Hibben
James Hazen Hyde
A. Lawrence Lowell
Mrs. Philip M. Lydig
Clarence H. Mackay
Charles H. Sabin
John S. Sargent
James Stillman
E. T. Stotesbury
Willard Straight
Edward Tuck
W. K. Vanderbilt
Henry Walters
Mrs. Edith Wharton
Harry Payne Whitney

In making the announcement in behalf of the committee on November 3, 1917, Mr. Lamont said that in order to avoid any possibility of encroaching upon relief work, no contributions for the gift to France would be solicited until the war is over.

"But," he explained, "to many friends of France it has seemed altogether appropriate that the admiration of the American people for the French nation should be expressed in beautiful and enduring form. The battle of the Marne may prove to have been the greatest event in the world's history, many think the saving of civilization. It is inconceivable that it should not have a monument; and what could be more fitting than that America should, in this manner, show her admiration for this signal record of the valor and heroism of the French people? There is certainly ample precedent in the Bartholdi statue, given to us by France, and now permanently aglow with the light of Liberty which France helped win for us."

The statue is to be made by Mr. Frederick MacMonnies of New York. He has already made for the committee a sketch representative of the spirit of France at the Marne; a beautiful winged woman's figure, which is nearly spent by the storm of battle and is almost beaten down by overwhelming odds, throws off the heavy weight of defeat by a supreme effort, and raises the fallen flag of her liberties.

### A Monument to American Relief Work

If Americans are planning to erect a monument to French valor, Frenchmen are also planning to erect a monument to American generosity. Under date of July 3, 1917, a cable despatch from Paris announced that a beautiful monument would be erected in some prominent square in Paris to commemorate the co-operation of American men and women in relief work in France during the war.

The committee for the erection of the monument is under the patronage of President Poincare and is presided over by Leon Bonnat, head of the National School of Fine Arts. The Honorary Presidents are Paul Deschanel, President of the Chamber of Deputies and Antonin Dubost, President of the Senate. The other members of the committee are Marshal Joffre, Alexandre Ribot, the Premier and Minister of Foreign Affairs; Paul Painleve, Minister of War; Admiral Lacaze, the Minister of Marine; Jules Steeg, Minister of Public Instruction; Albert Dalimier, Under Secretary for Fine Arts, and Adrien Mithouard, President of the Municipal Council.

The honorary committee in connection with the work includes former Premiers Briand and Barthou, Rene Viviani, Minister of Justice; Alexandre Millerand, former Minister of War; Gabriel Hanotaux, President of the Franco-American Commission for the Development of Political, Economic, Literary and Art Relations; Professor Henri Louis Bergson, member of the French Academy; Georges Pallain, Governor of the Bank of France; Baron Edmond de Rothschild, Countess Murat, the Marquise de Ganay, and other prominent Parisians.

### The Protection of Art

Very soon after the outbreak of the war, measures were taken in various threatened districts to protect notable buildings and works of art. At Rheims, Soissons and other places, sand-bags were piled up against outer and inner walls of cathedrals and churches to protect them against damage by shell-fire. In February, 1918, the authorities took measures to protect the art treasures of Paris from air raids. The stained glass windows of the Sainte Chapelle were removed to vaults; the sculpture on the Arc de Triomphe was covered with sand-bags; and the decorations by Carpeaux, illustrating the dance, in front of the Opera, and other art works were protected similarly.

## IN ITALY

### Landmarks and Monuments Destroyed by Enemy

A lamentable turn of events on the boundary between Italy and Austria in October, 1917, has led to the destruction of many beautiful architectural monuments and works of art in Italy, and the danger of still greater damage. During the summer of 1916, the Italian armies achieved a series of encouraging successes, which not only drove the greater part of the battle front back practically to the international boundary, but also carried a part of it across the line into Austrian territory. The Bainsizza plateau was attained, and Gorizia was captured August 9, 1916. A year later, in August, 1917, Italian activity was renewed on a large scale on the Julian and Carso fronts with successes during the entire month. With September, however, the fortunes of war began to fluctuate and seemed to be in the balance during the remainder of the month. With German aid, the enemy offensive was begun with special vigor in October, 1917, and on October 24 began a series of battles on the Isonzo front which resulted, on October 29, in the collapse of the Italian line on that front. Then followed a series of enemy advances until at the present time the battle front reaches from a point on the Gulf of Venice about 18 miles northeast of Venice, west-northwest to a point about 15 miles west of the northern end of Lake Garda, and thence northward along the international boundary to Switzerland.

### Venice Bombed from the Air

Meanwhile, hostilities in the air had extended over a wider range, and on Tuesday, August 14, 1917, Austrian airplanes dropped four tons of bombs on Venice. The announcement from Vienna stated that they were dropped on the "Maritime Arsenal," as a reprisal for an Italian air raid on Pola a few days before. This attack, ostensibly aimed at the Maritime Arsenal, struck the Civil Hospital which forms a part of the famous School of St. Mark. This school with its neighboring statue of General Bartolomeo Colleoni and the celebrated Church of Saints John and Paul, containing monumental tombs of the Doges, is considered one of the greatest wonders of the world. The chief ward in St.

Mark's School, with its magnificent fifteenth century coffered ceiling, was struck by a bomb. One-third of the ceiling was destroyed, the falling fragments causing victims among the patients underneath. Fortunately no damage was done to artistic features either in the hall below or to the facade. The latter is decorated with unreplaceable sculptures and bas reliefs. All the fragments of the ceilings were carefully assembled and will be preserved for reconstruction later.

The attack on Venice led at once to measures for the security not only of the inhabitants but also of its architectural monuments and other works of art. By November 14, 1917, the evacuation of the city by the civil population was far advanced, and the work of removing art treasures was being prosecuted with great energy. At the beginning of the war great pictures, carvings, fine glassware, ivories and similar objects easily transported were taken to places of safety; but now, with the greater imminence of danger, the heavier works, which had been protected by sand-bags or hidden in cellars, were either taken away or given added protection. Verrocchio's famous statue of Bartolomeo Colleoni — pronounced by Ruskin to be the most beautiful equestrian statue in the world — was completely encased in protective covering. (See plate 76.) The Church of Saints Paul and John was protected with piles of sand-bags and heavy quilting. St Mark's was given a protective covering on the outside, and the sanctuary, pulpit and other ornamental parts of the interior were protected with sand-bags and quilting. The four gilded bronze horses from the exterior of St. Mark's also were removed. This was their fifth journey, as they were taken from Rome to Constantinople and thence, in 1204, to Venice. More than a hundred years ago Napoleon took them to Paris, whence they were removed to Venice. It was announced in November that they would probably be housed temporarily in the Museum of the Baths of Diocletian, at Rome. (See plates 71–75.)

In January, 1918, the question as to whether Venice would offer resistance, in case of a farther enemy advance, or would yield in order that her unremovable buildings and monuments might be spared the destructive effects of bombardment, was discussed in the public prints. Mr. Whitney Warren, writing from

Paris under date of January 7, advocated resistance, rather than submission. He argued that if the Germans entered Venice they would not treat it as a jewel and it would enjoy no immunity at their hands. Furthermore, Venice would be of immense maritime advantage to the enemy. He said: "Let Venice perish rather than be abandoned. In all my travels in Italy I have found no real patriot who does not hold this opinion."

Under date of January 28, 1918, Count Grimani, for 22 years Mayor of Venice, was quoted as saying:

"In case of a further advance of the enemy the question whether Venice shall resist or give in without resistance is essentially a military problem on which I may offer no opinion. The last remaining art treasures are being removed. Venetians see them go with sorrow, but also with satisfaction that they are safe, realizing the joy they will feel when they are returned. In robbing Venice the enemy would commit the greatest infamy of the war, for she would be robbing the whole world, to which the supreme beauty of Venice belongs."

On the night of Sunday–Monday, February 3–4, 1918, shortly after midnight, a new air attack was made on Venice and continued until daylight. A number of bombs fell into the water at the eastern end of the Grand Canal. One fell near the Church of Santa Maria del Giglio, another in the Calle Furlain, and three on the Lido. Fortunately, no one was killed. The population was startled at the unexpected resumption of the air raids, as it had been expected that Venice would not be subjected to further bombing. At Mestre, a suburb of Venice, the Church of San Lorenzo was almost entirely destroyed by bombs.

This renewed attack seems to have crystallized the sentiment of resistance in Venice. A cablegram dated March 14, 1918, said:

"Resist, resist, and, once again, resist! is the watchword that rings across the canals, bridges and lagoons of the tortured Queen of the Adriatic. In all her history, so many centuries long, Venice has never endured such martyrdom nor been threatened with such complete destruction as now.

"This situation has so elevated the spirit of her inhabitants that they have been transformed into so many heroes. In October and November, 1917, after the disastrous retreat from Caporetto to the Piave, the question arose whether to defend Venice or not.

Military experts seemed to consider her defence by land impossible. Some cannon were removed and part of the fortifications dismantled.

" Since then, however, the people, headed by the Mayor, Count Grimani, have claimed the sacred right to defend Venice, the historic portal of their motherland, even though they and their sons be buried in her ruins.

" The inhabitants, already reduced to about one-third of their former number, have been depleted still further by the sending away of 20,000 women, children and old men with a view to eliminating useless mouths to feed and preventing unnecessary slaughter, keeping in the city only those able actively to defend her.

" Austro-German ingenuity seems to have invented a new system of dropping bombs, which, instead of being distributed as before at a considerable distance from each other, are placed in large numbers in a very limited space, so that the resultant destruction is complete.

" Venice, unlike Paris and London, is built directly on the water and has no cellars where the people can take refuge, so that the only possible way to construct shelters is to resort to sand-bags and roofs of corrugated iron under which a few can seek safety."

### Destruction in Padua and Other Cities

Meanwhile, Padua, Treviso, Vicenza and other cities had been undergoing experiences similar to those of Venice and taking similar measures, and by the end of 1917 the whole of northern Italy had taken steps to protect its art treasures.

All the movable paintings, statues, art treasures and famous stained glass windows, from Milan to Venice, were carried to places of safety or surrounded by cement and brick encasements to shield them against bombs which might be dropped in aerial attacks. There was scarcely an old church in northern Italy that had not been reinforced, buttressed and otherwise protected so that it could not crumble or collapse unless hit squarely by a large shell. The wonderful stained glass windows were removed from Milan Cathedral and replaced by paper.

Public statues and tombs of artistic importance now cannot be recognized because of the brickwork around them. All the great tourist centers of northern Italy, which have been the delight of American and other travelers, appear unfamiliar now.

On the night of Saturday–Sunday, December 29–30, 1917, Padua was subjected to its third and, up to that time, most destructive air raid. The ancient monumental Carmini Church, containing frescoes by Titian and Campagnola, was set on fire by incendiary bombs which scattered widespread destruction and death. The dome of the massive church burned throughout the night, making a majestic spectacle, but the solidity of the ancient walls, dating from 1250, and the copper roof saved the main structure and the paintings within it from destruction. The bomb hit the outer edge of the dome, which was soon a fiery furnace, rising 160 feet in the center of the city.

The church of San Valentino and the ancient palace were hit and badly wrecked. Private buildings were also struck. One building was pierced from top to bottom and torn to pieces by a bomb which buried four persons, three of whom were children.

Pope Benedict XV, who had previously requested the enemy nations to spare Italian churches, was particularly grieved at the attack on Padua and addressed a note to both the Emperor Charles of Austria and to Kaiser Wilhelm protesting against such outrages. A despatch from Rome, dated January 4, 1918, says that the Pope's note contained "a firm reminder of the promises of both those monarchs at the time of the start of the Italian invasion that Teutonic troops would abstain from attacks on defenceless cities."

This remonstrance, however, fell on deaf ears; and early on the morning of February 4, 1918, still another attack was made on Padua. As usual, the damage and loss of life caused were of no military value whatsoever to the enemy. A modest hotel was destroyed, and a drug store, which had the bad luck to be struck in two different raids, was reduced to a pile of masonry. Shell fragments struck the civil hospital and the headquarters of the British Red Cross without injuring any one, and the Bishop's Palace was missed only by a few yards. With all its broken windows, it makes a fit pendant to the Cathedral, the wrecked facade of which rises beside it. More than fifty bombs were thrown by the enemy airmen, who also visited Mestre and Treviso again. At Mestre they shattered a church and at Treviso once more hit a civil hospital.

### A Changeable Inscription

An incident of the advance and retreat of the Italians which is not without its amusing aspect, occurred at Cormons, where some years ago the Austrians erected in the principal square a statue to Maximilian, Emperor of Mexico. When the Italians occupied Cormons in 1915 they found that the effigy of Maximilian strikingly resembled Columbus, so they replaced the inscription to Maximilian by one reading: "Grateful Italians dedicate this statue to Columbus." When the Austrians reoccupied the town in 1917, they removed the Italian inscription, and the statue represented Maximilian at last accounts.

## IN RUSSIA

### Iconoclasm of the Revolutionists and Rebels

The Russian revolution and succeeding events were accompanied by a wave of iconoclasm which has resulted in the permanent destruction of many monuments and the change, temporarily at least, of many place-names. During the early summer of 1917 everything associated with Czarism was ruthlessly abolished, even when the abolition destroyed or profaned historic associations. Names of places and squares taken from Romanoff rulers and Grand Dukes gave place to names of revolutionary heroes and to abstract terms expressing the enthusiasm for freedom.

The changes provoked strange controversies and amusing incidents. Among the elaborate street names proposed in Petrograd was the title "Street of the Eternal Memory of the Martyrs of the Revolution." In many towns in June, 1917, were displayed at street corners the names of Kalayeff, Gershuni, and other Terrorists who assassinated despotic Ministers and Governors. In Moscow it was even proposed to change the "House of Boyard Romanoff," wherein the Romanoffs lived before their elevation to the throne, to "House of a Russian Boyard." The new port town Romanoff, on the Murman coast, was deprived of its name. As it was difficult to change the names of large towns called after Emperors and Empresses like Ekaterinburg, in the Caucasus, and Nikolayevsk, in Siberia, without causing confusion, it was suggested that they be temporarily christened "Former Ekaterinburg" and "Former Nikolayevsk."

The destruction of historic monuments associated with the monarchy went so far that even the revolutionary Council of Workmen's and Soldiers' Delegates protested. This work was done not by incendiary mobs, but by deliberate action of "reform committees." Alone the great Peter's name and statues have been spared. Despot as he was, he commands all Russia's respect. Leonid Andreyeff and other well known men of letters and artists have protested against the iconoclasm which goes so far as even to deny history.

During the terrible conflict between the Revolutionists and the Bolsheviki in Moscow during the week ending November 17, 1917, many magnificent landmarks suffered. On Wednesday, November 13, during the bombardment of the Kremlin, the Cathedral of the Assumption, with the famous tower of Ivan Veliky, was destroyed, and the Church of Saint Basil took fire. This wanton destruction of national shrines, which even Napoleon had spared, seems to have stimulated both sides to a conclusion of hostilities, and a peace between them was reached November 17. The fantastic Church of St. Basil is a priceless treasure, one of the wonders of Oriental architecture, and the Cathedral of the Assumption is the glory of the Kremlin. The sacrilege shocked even one of the Bolsheviki Ministers, Lunacharsky, whose first impulse was to resign, but who afterwards withdrew his resignation and published an appeal to the people to preserve their national treasures. This, after the looting of the Winter Palace and the bombardment of the shrines of Moscow. On all sides one heard the bitter cry, "Even the Germans would not have done this."

### The Forests of Siberia

Part of the wealth of Russia whose ultimate possession depends upon the outcome of the present war lies in her Siberian forests. Mr. L. O. Wilgress, Canadian Trade Commissioner at Oomsk, Siberia, describes these forests in an interesting manner in the Canadian Forestry Journal of December, 1917. He says that the forest area of Asiatic Russia has been roughly estimated at 853,000,000 acres. The State owns the bulk of the forests of this region, the area amounting to 642,000,000 acres, of which 39 per cent. is classed as rich forest lands. In addition the forest

possessions of the Imperial Cabinet have comprised an area of 54,000,000 acres, chiefly in the Altai district. These forest lands will now probably be converted into national property, and more attention devoted to the exploitation of their timber wealth. Large tracts of forest land also belong to the Cossacks, particularly along the Amur river in Eastern Siberia.

The largest forest area of Asiatic Russia are in the western and eastern regions of Siberia. It is estimated that in that part of Siberia which lies west of Lake Baikal there are 465,000,000 acres of virgin forest, and Eastern Siberia, while not so richly endowed, has sufficient timber to supply the requirements of foreign markets for many years to come. A large part of the forest area of Siberia is still unexplored, the resources in number of trees, species and value being unknown. Thus it is estimated that only about a quarter of the whole area had been either wholly or partially investigated by the year 1915. The investigations which have been made, however, have unquestionably established the great value and wealth of these forests, while as regards the exploitation of their timber resources, only a fringe has yet been touched.

Mr. Wilgress says that measures are now being considered whereby the forest resources of Siberia may be exploited to better advantage. For this purpose conferences have been held between those interested in the timber trade and the State departments concerned. It has been realized that in order to increase the timber outputs, a correct system of management of the forests is necessary, together with the organization of the sale of timber. A reliable investigator has stated that with proper exploitation the timber wealth of this region should suffice for the requirements of Western Europe for many generations to come. In order to make possible, however, the shipments abroad of Siberian forest products, a proper organization is required, backed by sufficient capital to enable the adoption of up-to-date extraction methods. An enlargement of the existing mills and the creation of new saw-mills will also be necessary, as well as the establishment of other industrial concerns using wood as raw material. Closely related to the question of the organization of the sale of timber is the creation of railways and waterways connecting Siberia with the markets of Western Europe.

The usual practice in Siberia is to fell trees by hand near the rivers. Up to the present practically no use has been made of up-to-date logging appliances. The logs are hauled to the rivers by horses, a great number of men and horses being required for the work. They are either floated down to the mills by rafts or are brought down on barges. The scarcity and high cost of labor at the present time is directing the attention of timber producers to the question of introducing labor-saving appliances. Inquiries are being made for portable hoisting cranes, while it is probable that a demand could also be created for other logging appliances in use on the American Continent, such as cableways, stationary engines, tractors, locomotives, etc.

A plan was adopted before the war for the cutting of timber from the State forests on a large scale. The management of the forest lands belonging to the Government in Siberia has been largely in the hands of the Colonization Department of the Ministry of Agriculture. This department operates several saw-mills and supplies the peasants and newly arrived immigrants with building materials and other wood products which they require. Although the future position is uncertain, it is probable that the Colonization Department will take over the forest lands which hitherto have been under the control of the Imperial Cabinet. Little has been done up to the present for the exploitation of the timber wealth of these lands.

### The Shifting Sands of Astrakhan

In 1916, an interesting memoir by Mr. J. G. Firstov concerning the shifting sands of Astrakhan was published in Petrograd. From this work it appears that 10,000,000 acres of the province in question are covered with shifting sands formed during the nineteenth century and subsequently. These sands have been spreading at the rate of 100,000 acres per annum, the result being the transformation of good pasture land into a barren waste. The principal cause is over-grazing; flocks and herds are kept so long in one place as to result in the complete destruction of the turf. Poor agricultural methods are also partly responsible. About the beginning of the present century the government undertook measures of control and reclamation, and between 1904 and 1909 an

area of about 46,000 acres was brought under cultivation. In 1913 a special service was organized to deal with the question. The province was put under the charge of a chief forestry officer and divided into six districts, in each of which a subordinate official was appointed to superintend the work. At the time of writing good progress has been made in planting soil-binders and growing herbaceous crops, but it was still problematical whether the province was adapted to the establishment of forests.

## IN GERMANY

### Melting Bronze Statues

Information from Germany concerning the effect of the war on her monuments and landmarks is meagre. It is feared, however, that owing to Germany's shortage of metals for military purposes, there has been a considerable destruction of monuments at her own hands. Under date of September 6, 1917, a dispatch from Berlin by way of Copenhagen reported that the German authorities had decided to melt down bronze statues for munition material. The same dispatch said that the Munich correspondent of the Lokal Anzeiger reported that orders for the expropriation of statues had been issued in Bavaria.

It is known that the Germans in Belgium and France removed church bells and bronze statues wherever possible. Notable among the latter were the statue of General Faidherbe at Bapaume and the statue of Catherine de Poix at Peronne. And in the first half of January, 1918, reports reached the United States that the Austrians were removing bells from their own churches for the same purpose.

### Historical War Medals

During the war the Germans have struck many medals commemorative of events which were planned to occur or had occurred. The most interesting of these to Americans is that which was issued to commemorate the sinking of the Lusitania. The medal is about 2¼ inches in diameter. On one side is represented the window of a ticket office. Inside of the window is a skeleton, personifying Death, selling tickets to passengers who stand outside the window. Over the window are the words "Cunard Linie" and at the side of the window the word "Cunard." Above the whole

design are the words "Geschaft uber alles. Fahrkarten Ausgabe," (Business above everything. Tickets given out.) On the opposite side of the medal is represented a sinking steamship, its bow and forward part still showing above the waves. Above the design are the words "Keine Bannware" (No contraband), and underneath the design is the inscription: "Der Grossdampfer Lusitania Durch ein Deutsches tauchboot versenkt 5 May 1915" (The steamship Lusitania sunk by a German submersible-boat May 5, 1915). As the Lusitania was sunk May 7, 1915, with a loss of about 1,145 lives, including 115 American citizens, it would appear that the medal was prepared in anticipation of the event and that the sinking was two days behind the expected date, or that there was an error in dating the medal.

A dispatch from the Hague, dated March 20, 1918, says that a large business has developed in Holland in German curios, particularly in medals struck by the Germans to commemorate victories or, sometimes, prospective victories which never materialized. These latter medals were usually never publicly issued or were withdrawn upon the failure of the operations. Their rarity naturally adds to their value to the collector and dealer. Probably the rarest of the German medals is one which was struck to commemorate the anticipated capture of Verdun. It is said to be one of the best specimens of German medal, and only six existing copies are known to the Dutch curio dealers. Those six are being held at a valuation of about $1,000 each. The practice of striking medals apparently continues, for scarcely a week passes without several new varieties reaching Holland. One Dutch collector of these medals has spent $10,000, and now has over 600 medals, which he values at $50,000.

### Retention of German Art Treasures

Germany, which has shown small concern for the preservation in situ of the art and scientific treasures of other countries —as, for instance, the Chinese astronomical instruments which were taken from the walls of Peking by the German troops during the Boxer Rebellion and are now in front of the Kaiser's palace at Potsdam — has recently been growing solicitous about the removal of her own treasures of similar kind through the peaceful opera-

tions of foreign collectors. In the early part of 1918, art connoisseurs, collectors, professors and legislators in Germany carried on a heated controversy about the question whether German art treasures should be protected by law against exportation. The German Government considered the submission of a bill for that purpose to the Reichstag, but so far this plan has not taken shape. The matter was discussed in the Prussian Diet a short while ago and the Diet petitioned the Imperial Government for a law safeguarding German art treasures against sale to foreign countries.

Two of Germany's greatest art experts, Professor von Bode, Director General of the Royal Museums, and Dr. von Pannewitz, are reported to be against any law stopping the export of German art treasures entirely. Professor von Bode says that if such a law were passed it would immediately be replied to by Great Britain and France with similar measures, and the possibility of increasing the collections in large public museums from private sources would cease, especially in Germany's case, since it is well known that both England and France have far larger private collections, from which Professor von Bode himself has gathered many masterpieces for German museums.

Before America entered the war American collectors were the most feared in Germany, because of their financial resources which made competition for most German collectors impossible. Since America became involved, millionaires of neutral countries such as Denmark, Holland and Switzerland have entered the field of competition and are said to be paying immense prices at German art auctions.

It was for this reason that Professor von Bode, although he is against a law prohibiting all art exports, would like to see the Government exercise some sort of control over dealings in art treasures. He expressed great regret that because of the time being too short nothing could be done to prevent neutral dealers from making wholesale purchases from Baron von Oppenheim's collection, which was announced to be auctioned March 19, 1918. Professor von Bode, however, advises the Government to take measures for the future control of art treasures in Germany by inventorying and by reserving for the public museums options on any art pieces on the German market. Similar laws governing the

art trade of Italy did not prevent the Martelli family from selling only recently the so-called Donatello statues to an American collector for 2,000,000 francs, which example Professor von Bode quotes as proving that State control does not kill trade.

## IN PALESTINE

### Jerusalem Monuments Conserved by the British

The entry of the British into the city of Jerusalem on Monday, December 10, 1917, was an event of historical importance in itself, and was characterized by two particularly interesting incidents. One was the entry of the victors on foot — not as conquerors, but as pilgrims to the Holy City. The other was the proclamation of General Allenby to the effect that the sacred monuments of Jerusalem should be protected and maintained according to existing customs.

A few years before a new road was cut through the walls in order that the Kaiser might ride in where none had ridden before. The British entered the city with no such spirit of vainglory, but in a spirit of reverence for the centuries of holy tradition of that venerable place. The General and his entire staff, accompanied by the French and Italian attaches, therefore dismounted from their horses outside the gate and passed through the ancient doorway on foot. They passed only a few yards within the gate, and then at the Tower of David, a very old fortification which was the center of the Turkish administration, the formal surrender of the city was made and the proclamation of the new and Christian Government was read.

This proclamation, which may well be reckoned as one of the historical documents of the war, on account of both its intrinsic significance and its contrast with the practice of German invaders in Belgium and France, read as follows:

To the Inhabitants of Jerusalem the Blessed
and the people dwelling in its vicinity.

The defeat inflicted upon the Turks by the troops under my command has resulted in the occupation of your city by my forces. I therefore here and now proclaim it to be under martial law, under which form of administration it will remain as long as military considerations make it necessary.

However, lest any should be alarmed by reason of your experiences at the hand of the enemy who has retired, I hereby inform you that it is my desire that every person should pursue his lawful business without fear of interruption.

Furthermore, since your city is regarded with affection by the adherents of three of the greatest religions of mankind and its soil has been consecrated by the prayers and pilgrimages of multitudes of devout people of these three religions for many centuries, therefore do I make known to you that every sacred building, monument, holy spot, shrine, traditional site, endowment, pious bequest or customary place of prayer of whatsoever form belonging to the great religions of mankind will be maintained and protected according to the existing customs and beliefs of those to whose faiths they are sacred.

As soon as the ceremonies were over, Gen. Allenby placed guards around the Mosque of Omar, the Holy Sepulchre, and other sacred places, selecting the guards with great tact and good judgment.

The Mosque of Omar, which stands on the site of the Temple and is regarded by Moslems as the second holiest spot on earth, was placed under the protection of a cordon of Mohammedans drawn from the Indian army. In the future something will be done to secure to Jews and Christians at least the right of free access; but for the moment the necessary thing was to reassure the Mohammedan world that a Christian triumph did not mean any insult to their faith, and for the present no non-Moslem is to pass within the cordon without permission of the Military Governor and the Moslem in charge.

In like manner Christian guards, and especially Catholic Irishmen of the Leinster regiment, were assigned to the Holy Sepulchre and the Basilica of the Nativity at Bethlehem and the many other sites which are in Catholic hands. The guardianship of each shrine has been given to the adherents of the faith to which it is sacred.

The tomb of Abraham at Hebron is under a Mohammedan guard.

Simultaneously with these measures, a proclamation printed in the Arabic, Hebrew, English, French, Italian, Greek, and Russian languages, declaring martial law and intimating that all the holy places would be maintained and protected according to the customs and beliefs of those with whose faith they were sacred, was posted in the citadel and on the walls of Jerusalem.

### Revelation by Military Excavation at Gaza

One of the most interesting incidents of the British advance in Palestine was an inadvertent discovery of the remains of an ancient church on a hill about fourteen miles southwest of Gaza and about sixty miles southwest of Jerusalem. When the troops were making ready for the advance on Gaza, Capt. Jordan of the Anzac Mounted Division (Australians) ascended a high mound which dominated one of the oldest crossings of the Gaza river and discovered that the Turks, in digging a trench around the top of the hill and in making a machine-gun emplacement, had revealed the edge of a mosaic floor of some kind. Further examination convinced him that this platform was quite extensive. He therefore secured the aid of some officers and men, who, after removing about six feet of soil and debris, uncovered a mosaic floor measuring 18 by 27 feet in size. Suspecting that this discovery possessed great historical importance, great care was used in its preservation by Rev. W. Maitland Woods of the Church of England, senior Chaplain of the Division. After the surface was cleared, it was photographed and drawings and measurements were made. Mr. Woods described the subsequent proceedings as follows:

"A number of engineers under Major C. E. Wilson, R. E., assisted me in the removal. First a trench was dug all around the floor so that we could work only stooping as low as our knees. Then, after carefully cleaning the portion to be first removed, hot glue was poured over it, and linen canvas spread over the glue. When the glue was cold a razor blade was inserted between the mosaic along a line previously agreed upon and the blade was worked gently to and fro until a very small chisel could be inserted. This slow and laborious method was persevered in until the portion was isolated, and then three layers, rubble, gray cement and white thin plaster, immediately under the mosaic stones were all carefully withdrawn from the part to be removed, which then was like a drumhead.

"As the substrata were taken away boards were placed underneath the mosaic, and were built up with flat stones, these 'piers' taking the weight and preventing fractures. The inscription was the most ambitious removal so far as size was concerned. We worked from 6 A. M. till 2 P. M. on a floor of earth burning with intense heat from the sun without a single stop. But the result was worthy of the effort, as although the inscription contains 8,000 small pieces of mosaic we did not lose one stone. The box in which

it was to be placed had been especially made by the engineers. In it was mixed a bath two inches deep of plaster of Paris, and when this was at the setting point the fragile mosaic was freed from the ground, was slowly pushed into the sticky substance and coaxed down absolutely level.

"In two hours' time the canvas and glue were washed off, and the mosaic padded with tibbin (the finely cut straw used for camel feed) was sealed in its case. This process was carried out with each separate piece. The work took fourteen days, and when we were half through I was told I could have no more plaster of Paris, as there was no more available. This was a terrible blow to me, but young Coveney, an engineer officer, said he knew where there was an excellent pocket of clay a mile down the wadi, and Egyptian laborers were set to tread it and mix it with tibbin, and the rest of the mosaic was slid into boxes filled with a 'float' of this mixture, which has now set admirably."

The inscription or that portion of it which remains has been translated by Mr. A. H. Snith of the Department of Graeco-Roman Antiquities, British Museum, to read thus:

> "X (sign of the Cross). This temple with spacious (? foundations) was built by our most holy (bishop or similar title) and most pious George ———— in the year 622 according to ———— (? the year of Gaza)."

The era of Gaza commenced B. C. 61, which would give the date of the church as A. D. 561.

Under this inscription were discovered the bones of the saint, lying feet to east and arms crossed on chest. These, almost 1,400 years old, crumbled at the touch. The right forearm had been broken and had been set beautifully, which was evidenced by the extra bulging bone growth around the fracture. There were skilled disciples of Esculapius in those days.

The mosaic also contained designs, representing a vase with a vine growing from it; four-footed animals and birds, including peacocks and doves, and an intermittent fret pattern with lines crossing in such a way as to suggest a swastika.

## IN CHINA

### Memorial to the Chinese Government

In 1914, a group of American learned and civic institutions and societies, including the American Scenic and Historic Preservation Society, addressed a memorial to the Chinese government

designed to enlist the active interest of that government in the preservation of the wonderful historic and artistic monuments of that country. The text of the memorial will be found on page 334 of our Annual Report for 1915. The document was sent to Hon. Wm. J. Bryan, then Secretary of State, with the following letter:

Hon. William J. Bryan,
Secretary of State.

Sir:

The Chinese race furnishes perhaps the greatest of all records of human society, and its future is closely associated with the destiny of society in this hemisphere. Our country contains an ever-increasing number of men and women devoted to the hope of China's triumph in modern civilization and government, in which case she will extend her matchless social and human experiment continuous from the remotest times unbroken. In this connection interested persons and institutions in the United States are seeking to establish in China a school of Archaeology as a means to encourage protection of the antiquities of China and provide for study there of China's ancient history.

On account of the ruthless destruction and plunder of antiquities in China since 1900, involving American citizens, the following individuals and organizations represented, having memorialized President Yuan Shi Kai, as shown herewith, have the honor to request your aid in the official transmission of their memorial herewith enclosed directly to Peking.

Furthermore, we have the honor to request:

First, that the Department of State, through its officials in China, use such means as it may determine to discourage all American citizens from vandalizing in China and from trafficking in broken and stolen sculptures and other archaeological and art works of historical value belonging to the people of China, and to render aid and counsel wherever possible to shield Americans from being involved with plunderers of Chinese antiquities, and in all ways possible assist in preserving the good name of the United States, its citizens, agents, and institutions, free from connection with the destruction of Chinese monuments and antiquities and the traffic in stolen and otherwise immorally or criminally obtained Chinese objects of antiquity;

Second, That the Department of State officially, semi-officially or unofficially, as possible, through its officials in China and elsewhere, discourage the plunder and destruction of Chinese antiquities in times of peace or war in China, whenever opportunities

permit, and support and encourage the Chinese officials and people in taking effective means to conserve their antiquities for China's benefit and the benefit of other nations.

Respectfully submitted, etc.

The signers of the memorial represented 37 universities and colleges, half a dozen museums, the Archaeological Institute, the National Sculpture Society, the large foreign mission societies and individuals.

Secretary Bryan expressed himself as in hearty sympathy with the objects stated and caused the memorial to be sent to the American Minister at Peking, for distribution to the Consuls of the United States in China, with instructions to those representatives of the United States Government "to use all possible and proper endeavors to further the suppression of vandalism in China on the part of American citizens."

At the annual meeting of the American Scenic and Historic Preservation Society, held at the American Museum of Natural History, in New York City, on January 17, 1918, jointly with the Museum, the following resolution, introduced by Professor Henry Fairfield Osborn, President of the Museum and member of this Society, was unanimously adopted.

Resolved, That the American Scenic and Historic Preservation Society and the American Museum of Natural History, meeting in conjunction, desire to extend to the President of the Republic of China their felicitations upon the plans that have been made for the protection of Chinese monuments and antiquities from vandals and the collection of these priceless relics of the history of China. We renew the expression of our hope that these collections may be safely preserved in a national museum.

Following the memorial which was addressed in nineteen hundred fourteen to the Government of China by fifty-two American institutions of art, learning and humanity, the members of our institutions desire to renew the pledge that we shall use all our influence to prevent the despoiling of China by the unauthorized sale of ancient works of art. We also believe that it is the duty of the civilized countries of the world, as far as possible, to return to China her ancient historical national monuments and antiquities for proper preservation under national custodianship.

### China's Ancient Monuments

At the same joint meeting of this Society and the American Museum of Natural History on January 17, 1918, above referred to, Dr. Roy Chapman Andrews, leader of the recently returned Asiatic Zoological Expedition of the Museum, spoke at length concerning the ancient monuments of China and Japan, illustrating his address with a profusion of beautifully colored stereoptican views. The remarkable pictures of the great Chinese Wall, of the extraordinary Avenue of Animals approaching the Ming Tombs, and the extensive cemeteries — one 30 miles long (see plate 77)— of a people whose chief religion is ancestor worship,— were among the most unusual Chinese views. The lecturer called attention, however, to the neglect of their monuments and antiquities by the Chinese, showing how these landmarks were either falling into decay through lack of care or were being deported by commercial vandals. The Japanese views showed by contrast the great care bestowed by the Nipponese upon their old pagodas, monuments and landscapes. The speaker said that a notable characteristic of the Japanese was their love of natural beauty,— a sentiment which seemed to be as strong among the rickshaw coolies as among the more cultured ranks.

Dr. Andrews has kindly furnished us with the following summary of his remarks about the ancient monuments of China:

A memorial was addressed to President Yuan Shi Kai of the Chinese Republic in 1914 by fifty-two American institutions of art, learning, and humanity.* The immediate result was the promulgation of an edict making legal recognition of China's monuments and antiquities and urging national co-operation in their preservation. Moreover, the governments of the United States, Great Britain and France through their ministers at Peking instructed their consuls throughout China to use all possible endeavors to further the suppression of vandalism on the part of their citizens.

Although this was an excellent beginning, political events soon gave it an unexpected check. Within little more than a year Yuan Shi Kai's monarchial ambitions were made public, and a rebellion immediately started which involved all China and resulted in the

* This was after an energetic campaign by Frederick McCormick, Secretary of the Asiatic Institute, in which Professor Henry Fairfield Osborn took an active part on behalf of the American Museum of Natural History.

death of Yuan. Since then the republic has been in chaos or has, to say the least, maintained a state of unstable equilibrium. Meanwhile the despoiling of China's monuments and antiquities has progressed unchecked. In the last ten years foreign collectors have visited many remote corners of the eighteen provinces on a systematic search for objects of art or archaeological value, and the menace to the records of China's ancient civilization has assumed alarming proportions.

Not only have smaller objects been carried away but pieces of sculpture, bas-reliefs, and parts of temples too large for ready transportation have been cut from their places and sometimes irreparably broken, leaving a scarred and disfigured reminder of ancient glories. Unfortunately this work of despoliation has been aided only too effectually by certain unscrupulous Chinese themselves who saw an opportunity for material gains in the plunder of the art treasures of their own country. Moreover, China is doing very little toward protecting the monuments and buildings which form not only the record of her own ancient civilization but which are of the utmost importance in the history of the world.

The Chinese are great builders, but they seldom repair the monuments which they have erected. In Peking, one of the most unique, picturesque, and romantic cities of the world, there are dozens of ancient buildings which form a precious heritage of the Chinese people and as such should be cared for by the nation. The Temple of Heaven, with its golden dome glowing like a great ball of fire above the purple tiles of its sloping roof, the white marble altar open to the sky, made sacred by the worship of China's most illustrious emperors, the beautiful *p'ai lou,* and the marble walks belong to China's posterity as records of her ancient glories. But such rare treasures need care to protect them from the ravages of time and weather.

When I visited the Temple of Heaven less than two years ago, I found its spacious courtyards choked with uncut grass and its beautiful walks and tile-capped walls almost obscured by growing weeds. The tiny roots were slowly but surely accomplishing their deadly work. The marble slabs were cracked, the tiles broken, and the walls crumbling; the great round temple itself was filled with dust and decay. In a very few decades this almost sacred spot will present only a heap of ruins overgrown with grass and weeds, and one more page will have been torn from the book of China's history.

The " Yellow Temple," not far from Peking, is one of the most sacred spots near the capital. Here are buried the garments of a holy Tashi lama who came as an ambassador from Tibet to Peking. It was the lama Panchan Bogdo from Tashi Lumpo, who died of

smallpox in 1870. The ashes of his cremated corpse were sent to Tibet, but over his clothes the artist emperor, Ch'ien Lung, erected a stupa in old Hindu style, a mausoleum of marble and gold. When I visited it first, in 1912, a yellow-robed priest showed me, with sorrow in his eyes, the atrocious destruction which had been inflicted on this sacred monument in 1900. This was during the Boxer Rebellion, when Japanese soldiers wantonly knocked off the heads of statues with the butts of their rifles and damaged bas-reliefs, but fortunately only a small part of the marvelous detail was destroyed by this act of vandalism.

On my second visit, in 1916, after an absence of four years, I was appalled at the signs of decay. The ancient temple of gray wood, with faded but magnificent columns, yellow, blue and green, was full of cracks and rifts. It was already leaning and seemed about to fall. In place of a beautiful *p'ai lou* which formerly faced the *stupa,* lay a heap of plaster, stone, and yellow tile. It is a very, very old temple but with a little care could still be made to stand for years.

At the end of Ha-ta-men street are the "Temple of Confucius" and the "Hall of Classics." One passes through a little door in the wall and enters a quiet courtyard full of trees, some of which were planted a thousand years ago under the Sung dynasty and, although twisted and wrinkled, are still stately and dignified like ancient sages.

Near a large wooden gate are ten curious old stones about three feet high. They are the holy drums of the Chou dynasty and are 2700 years old. Although priceless relics of antiquity, they remain outside, open to the ravages of cold and heat, of frost and rain. In the temple is the wooden soul-tablet of Confucius and in adjoining buildings are tablets of many disciples and pupils of the master.

The Hall of Classics is a group of temple-like buildings in a large garden where the text of Chinese classics is kept engraved on stone tablets. There is a wonderful *p'ai lou,* and in the center of a beautiful lake surrounded by a marble balustrade stands a splendid temple. It is the "Hall of Meditation," but now is deserted and covered with dust; dust is everywhere, blown in from the Gobi desert by whirlwinds from the north. The fine desert sand is powdered thickly over the stately throne and paneled screen, and has dulled the color of the red-lacquered wood and golden ornaments. In other halls stand classical texts engraved on stone, but between the sacred tablets are piles of boards and benches. An atmosphere of neglect, decay, and dilapidation rests on the Temple of Confucius. Not only is the material dust of the Gobi desert sprinkled over it, but something like mental dust as

well, and one leaves it with a feeling of sadness that China's most precious treasures of wisdom and beauty are left untended to perish from the earth.

A few hours' ride on the railroad brings one to Nank'ou and the Ming tombs. At the entrance to the valley in which lie the mortal remains of the great emperors stands a noble *p'ai lou,* one of the most beautiful in China. A magnificent road, once paved with marble slabs but now a crumbling ruin grown thick with weeds and grass, leads through waving fields of corn. Passing down the "Avenue of the Animals," where in huge marble figures, standing and recumbent, all the creatures of the earth are symbolized in mourning for the emperors, one arrives at a shallow stream once spanned by a beautiful marble bridge. This bridge, too, is in ruins, and at the splendid temples and tombs beyond one finds falling walls, weed-grown terraces, and crumbling stairways.

Throughout the length and breadth of China the picture is the same — relics priceless to history and to science neglected and crumbling in decay for want of the care which every civilized nation of the earth lavishes upon the records of its antiquity. Fortunately, the story is different in Japan, where the temples and monuments are cared for by the nation and its people and stand to-day as permanent memorials of her ancient civilization. In the "Society for Preserving Landscapes and Historic and Natural Monuments" Japan has a custodian for her national treasures and a safeguard of her history. China should have a similar active society to protect, care for and repair her buildings, monuments, and antiquities. She needs an Archaeological Survey, financed by the Government and administered by trained men, to locate and appraise her scientific treasures and to undertake the establishment of national and provincial museums where her priceless objects of art and antiquity can find a permanent resting place and be open to exhibition and study.

In this period of transition China's peril is great. She must awake to save the garments of her ancient civilization or they will be torn from her by ruthless vandals, bartered to enrich the coffers of soulless traders, and the records of her glorious past will lie in crumbling walls and heaps of dust.*

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* See American Museum Journal Vol. XVI, pp. 109–112 and Vol. XVII, pp. 525 and 530, for further illustrations of Chinese monuments given by Mr. Andrews.

## IN JAPAN

### Continued Activity of Japanese Society

We are pleased to note the continued activity of the Japan Society for Preserving Landscapes and Historic and Natural Monuments, which has not been interrupted by the war. The Bulletins of the Society have been received regularly, and by their contents* indicate the growing interest in this subject.

In July, 1917, we received a packet of six picture postal cards published by the society. Their titles are as follows:

1. "Members of the society assembled in the Compound of the Peers' Club starting for the reconnoitering of historical monuments in the neighborhood of Tokio May 27, 1911." (The members are seated in three very modern automobiles.)

2. "Original site of Daigokuden, the ancient capital of Nara, with reference to that of Chodo-in." (A wide landscape.)

3. "Nezame Gorge, near Agematsu, in the Kiso valley." (The upper of two pictures is a general view and the lower shows five gigantic pot-holes in the rock.)

4. "Genbudo in Tajima province — the Giants' Causeway of Japan." (Basaltic columns like those on the north coast of Ireland.)

5. "Prunus mutabilis, Miyos f. dilucularis, Miyos, in the Avenue of Mountain Cherries at Koganei near Tokio." (A magnificent large cherry tree in full bloom.)

6. "Cranes at Akune near Kagoshima." (A flock of these birds on the ground at the base of a mountain.)

### Monument to Prince Oyama

From the *East and West News* we learn that a number of distinguished men of Japan, without regard to party affiliations, have undertaken to raise a fund for the erection of a handsome statue to the memory of the late Marshal Prince Oyama, commander hero of the Manchurian campaign in the Russo-Japanese war. The sculptor selected is Taketaro Shinkai, of Tokio, and the statue will

* Although the text of these bulletins is printed in Japanese characters, the table of contents is printed in English. The Bulletins also contain interesting pictures.

stand on one of the finest sites in the capital — the compound of the War office. The enterprise is headed by Marshal Prince Yamagata, Fleet Admiral Count Togo and Marshal Count Herauchi, premier, and is an assured success.

### Monument to an American Aviator

From the same source we learn that the Japanese are about to erect a monument to the memory of Frank Champion, an American aviator, who lost his life during a flight at Kochi on October 30, 1917. The aeroplane exhibition had been financed by Mr. Kito, a wealthy citizen of Kochi, who hoped to awaken greater interest in aviation among his countrymen. Considerable money has been raised for the memorial, but Mr. Kito insists that it be given to the family of the unfortunate aviator in the United States. He will bear the expense of the monument himself, having paid all costs of the aviator's funeral.

### Chair of American History in Tokio University

On February 2, 1918, announcement was made in New York City that Mr. A. Barton Hepburn, Chairman of the Board of Directors of the Chase National Bank, had given funds to the Imperial University of Tokio for the foundation and endowment of a chair in the study of the Constitution, history, and diplomacy of the United States. The money for the endowment, which is said to amount to $125,000, was presented to the University through Baron Shibusawa, the Japanese financier who recently visited the United States; and, according to the East and West News Bureau, the fund will be administered by a committee composed of Baron Shibusawa, Roland F. Morris, the American Ambassador to Japan; Viscount Ishii, head of the Japanese diplomatic mission which concluded agreements with America last summer; Baron Megata, head of the Japanese financial mission which was here last fall, and President Inouye of the Yokohama Specie Bank.

"In handing over the sum to Baron Yamakawa, President of the University," said the bureau, "Baron Shibusawa dwelt upon the desire of the donor to bring the educated elements of the Japa-

nese and American people to a mutual understanding. He wished Dr. Inazo Nitobe, now an exchange professor in the United States, to be the first occupant of the chair."

Respectfully submitted,

GEORGE FREDERICK KUNZ,
President.

EDWARD HAGAMAN HALL,
Secretary.

# APPENDIX A

## THE CARE OF SOLDIERS' GRAVES

Copies of Documents Placed by this Society in the Hands of the American Government, Giving Details of the Work of the British "Directorate of Graves Registration and Enquiries" and Containing Many Suggestions for Similar Service for the American Army.

## ABBREVIATIONS

A. G.= Adjutant General.

A. F.= Army Form, or blank form, usually followed by a number or a letter and a number, as "A. F. W. 3314."

A. P. & S.= Army Printing and Stationery, usually followed by Depot, as, "A. P. & S. Depot."

D. A. G.= Division Adjutant General.

D. G. R. & E.= Director of Graves Registration and Enquiries.

G. H. Q.= General Headquarters.

G. O. C.= General Officer Commanding, usually followed by some further designation, as, "G. O. C. Lines of Communication."

G. R.= Graves Registration.

G. R. & E.= Graves Registration and Enquiries.

G. R. O.= General Routine Order, usually followed by a number, as, "G. R. O. 1437."

G. R. U.= Graves Registration Unit.

L. of C.= Lines of Communication.

N. C. O.= Non-commissioned Officer.

O. C.= Officer Commanding, usually followed by some further designation, as, "O. C. Lines of Communication."

# THE CARE OF SOLDIERS' GRAVES

## Introductory Note

On pages 457–465 preceding we have given an account of the tender by the American Scenic and Historic Preservation Society to the United States Government of its services in the care of the graves of American heroes buried in European soil.

Following are copies of documents received from the British Directorate of Graves Registration and Enquiries which contain many details of the remarkable system developed by the British Government and carried on with civilian aid, to which general allusions have been made in the body of this Report.

The originals of these documents were placed by this Society in the hands of the Chief of the Cemeterial Division of the Quartermaster General's office at Washington.

The system of graves registration and inquiries of the United States Government for the European War was in its initial stages only in December, 1917, and no information is available to show how fully it has been developed at the present time. The British documents are therefore reproduced to show what our great ally has done to preserve the personal identity of the graves of her soldier dead and to care for the spots made sacred and historic by the sacrifices of her heroes in this great war. We may confidently expect that the American Government will not do less for the soldier dead of this nation.

*Headquarters of the Society*
*No.* 154 *Nassau St., New York*
*April* 12, 1918

Document No. 1*

## THE CARE OF THE DEAD

In a graveyard west of Vimy there are buried 1,320 French soldiers and more than 600 English. The earth is bare on most of the English graves; the French ones are older, but all are cared for alike by the Englishman now in charge of the place. "We leave you our trenches and our dead," a French officer said to an English one when our army took over this part of the line, and both parts of the trust are discharged with a will.

What this means for the French, one feels when one sees the visits of French soldiers' friends to their graves. The other day a French woman in deep mourning came here with a handful of white flowers to place upon one of these. Probably it was her son's, for she was not young. While she was arranging them at its head, there came into the cemetery one of the usual little bareheaded processions — a N. C. O. showing the way; then an English chaplain with his open book; then, on a stretcher, the body sewn up in a brown army blanket, a big Union Jack lying over it; then half a dozen privates looking as Englishmen do at these moments — a little awkward, but simply and sincerely sorry. As they passed the French woman she rose and then, evidently moved by some impulse which shyness made it difficult to follow, fell in at the rear of the procession, with some of the flowers still in her hand. When I next saw them, the men were standing round the new grave, the chaplain was reading aloud, "dust to dust" and "ashes to ashes," and the woman, a few yards away, was kneeling on the ground. The service over, and the rest turning away, she came close to the grave, dropped the white flowers in, and went back to the other grave empty handed.

One knew, though the woman could not, how all this would be told to the dead Englishman's comrades; and one felt the truth of Sir Douglas Haig's saying, that a kind of work which "does

* This document was printed in London in the latter part of 1916.

not directly contribute to the successful termination of the war" may still "have an extraordinary moral value to the troops in the field, as well as to the relatives and friends of the dead at home." But for the work of the Army's Graves Registration Units, this little scene and many other scenes equally binding, in their degree, to the friendship of England and France could scarcely have taken place. After the French Army had left this district, the French soldier's grave might not have been taken care of, perhaps could not have been even known to be his; the Englishman might have been buried under cover of night in some vacant space near the firing-trench, and all trace of the grave blown away next day by a shell. To know the full worth of what these units are doing now, one needs to see first what the state of things was in the first months of the war.

In those days a man was commonly buried close to the place where he fell. Wherever hard fighting had been, in France or Belgium, the eye of the traveller along the roads is struck by many low crosses sticking out of the ground — in the fields, in cottage gardens, in corners of farmyards and orchards, even on roadside strips of grass. Where the ground has changed hands a good deal in the course of the war, you may see, within a few hundred yards of each other, the gabled and eaved cross of the Germans, with "Hier. ruht in Gott" and a name painted white on a dark ground, the beaded wire wreath of the French, with its "Requiescat" or "Mort pour la France," and the plain-lined cross of the English, white or light brown or just the unpainted wood, "In loving memory" of one or more officers or men. Even now a good many of these isolated memorials are raised. The very position of some of them is eloquent. Near Fricourt, on what used to be No Man's Land till we won it this summer, a number of crosses, all of the English sort and inscribed in English, stand to the honoured memory of "an unknown French soldier," "two unknown French soldiers," "six unknown French soldiers, here buried." Here, when our troops took the German front line on the 1st July, it was one of their first cares to bury the French comrades who fell while holding this part of the front during the winter, whose bodies could not be retrieved at the time of their death, from under the fire of German machine-guns, and, when recovered at last, were beyond all chance of identification.

Near La Boisselle, again, is a cross inexpertly made of two pieces of lath, and lettered in pencil: "In loving memory of 2nd Lieut. X., —— Regiment, killed here, July 1st, 1916." It stands scarcely ten feet in front of the line from which our army advanced on that morning. You feel, when you see it, the thrill of the first moment of the long battle of the Somme — the subaltern giving the word to his men, and himself springing first out of the trench, and falling almost at once, and the men pressing on.

That is a special case of a grave on a site more monumental than Westminster Abbey itself. A few such graves, and some part of the trenches near them, will probably be preserved forever by village communes or private owners of land, as memorials and relics of the great war. But not every man can be buried just where he falls. As a rule, the spot remains under fire for some time after his death. Even if it could be done, and the history of the war be left written in this way on the face of the country, — a long dotted line of graves representing a trench, a cluster of graves a skirmish, a dense constellation a battle — the record would not be durable. France could not fence off a strip of country 300 miles long and many miles wide, and keep it up as a historical museum. And nothing else could preserve all the graves, or most of them. Some would be treasured and tended, as they are now, by farmers and cottagers. Others would soon be lost sight of. In a few months the earth of a newly made grave sinks in, the cross falls away, and may split, the writing on it is weathered away. Unless something is done, and done promptly, every trace of an outlying grave may be gone in a year. That is what might have happened to thousands of British and French soldiers' graves if an Englishman, full of goodwill and energy, had not noticed the danger in time, and stepped in, with a few like-minded friends, to avert it.

How the work was begun, and how it has grown, may next be described.

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In the autumn of 1914, the necessity for a continued organization to undertake the supervision of graves was recognized, both from the point of view of national feeling, and to discourage the disconnected and spasmodic efforts of private individuals, which

were threatening to create friction and confusion. The services of Mr. Fabian Ware, who, while employed under the British Red Cross with French troops, had already interested himself in the subject, were obtained by the Army, and, later, this gentleman was granted a commission in order to supervise the department of which he is now Director. It was not until March, 1915, that the organization of the Commission of Graves Registration and Enquiries finally assumed its present shape.

Under the Directorate are the Graves Registration Units in the different spheres of military activity. In France and Belgium there are four of these units, each with their two or three sections. Three of the four units divide the British front between them, from north of Ypres to the Somme battlefield. The fourth unit deals with everything outside and behind the beats of these three. When an officer or man is killed at the front, or dies of wounds, his burial is at once reported to the Director as well as to the base. If killed in action, he may still be buried, in the old way, somewhere near the trench. If so, the chaplain or officer who buries him reports the position of the grave, and one of the officers of the Graves Registration Units visits it, verifies the record, affixes, if necessary, a durable cross, with the date, the man's name, rank, regiment and regimental number upon it, clearly stamped on aluminum tape, and enters these particulars and the exact site of the grave in the register. But this mode of burial is becoming much less common. The Army has been quick to realise the desirability of burying its dead in the nearest of the 300 or more recognized cemeteries behind the line. The bodies are carried back by road or light railway to one of the little wooden, iron, or canvas mortuaries which the Graves Registration Units have set up in the cemeteries. There the soldiers in charge of the cemetery do all that remains to be done, and an eye-witness can assure the friends of soldiers at home that there is nothing perfunctory about these funerals. Everything is done as tenderly, and reverently as if the dead man were in an English churchyard among themselves.

When a death takes place in a hospital, there is, of course, a regular cemetery at hand, and registration is simple.

Some of the cemeteries are great extensions of little village graveyards. Some were begun by special corps or divisions, which

wished to bury their dead all together. In one you find a separate plot, each with its special entrance, for Gurkhas, Sikhs and Punjabis. Under the great trees of another, where are many of those who fell at Festhubert, some of our Indian soldiers have built, for their comrades, brick tombs of extraordinary massiveness. At Villers-aux-Bois the French buried 2,500 of those who were killed in winning the Vimy Ridge. On each grave, at the foot of its wooden cross, there is still stuck in the earth, neck downwards, the bottle in which the first hasty record of the interment was placed. A tiny chapel at one end shelters the Christ brought from the ruined Calvary of Carency, and a little coloured image of the Virgin riddled with German bullet-holes. In all the cemeteries the Graves Registration Units keep the graves, British and French, in repair; they sow grass and plant flowers and shrubs, under the advice of the Headquarters of British gardening at Kew. A few of these places are already gay with autumn flowers in full bloom. More will be brightened in this way next year, when all the arrears of tidying and restoration that the units found waiting for them have been overtaken.

Outside the cemeteries themselves an immense amount of work is done. The staffs of the units are constantly searching all possible and almost impossible places for isolated graves that may have escaped registration. The Directorate answers every enquiry* sent by a soldier's friends, and will, if they wish, take a photograph of a grave and send it to them for nothing, thanks to the funds provided for this purpose by the Joint War Committee of the British Red Cross Society and St. John's Ambulance. The Director and his officers co-operate with the French engineers, sanitary authorities and communal councils in making arrangements to take advantage of the noble and moving gift made by the French nation on December 29th, 1915, when the law was passed which acquires forever, in the name of the French Government, the special cemeteries where most of our dead in France are buried.

No money is wasted and no energy is diverted that might have been spent in fighting; all the officers of the units are men dis-

* All enquiries should be by letter, addressed to: — Director of Graves Registration and Enquiries, War Office, Winchester House, St. James's Square, London, S. W.

qualified by age, or other disability, for combatant service; the other ranks are filled with men permanently relegated, through age, wounds, or sickness, to duty behind the front. But much of the work is done under fire. One officer, Captain J. D. Macdonald, has already been killed on duty, and two others and several men wounded.

In all wars it has been one of the fears haunting a soldier's friends that his body may be utterly lost. Even in this war there have been such irretrievable losses. But in no great war has so much been done as in this, to prevent the addition of that special torment to the pains of anxiety and of bereavement.

Document No. 2 *

## THE REGISTRATION AND CARE OF GRAVES

During the present war a branch of the Adjutant-General's Department has been created to care for and preserve the identity of the graves of British officers and men. Units were established for this purpose in France and Belgium shortly after the battle of the Marne, and in Egypt, Salonika and Mesopotamia recently.

The Director of Graves Registration and Enquiries is the officer directly responsible for this work. The duty of the Graves Registration Units is to register the position of graves and to see that they are marked with durable wooden crosses bearing a metal inscription giving the name, number, rank, regiment and date of death.

While these Units have been successful in registering and marking a large number of graves at the front and many in advanced positions, where they might otherwise have been lost, it is not possible, and never will be possible, to obtain a record of all graves. If, as is to be feared, the enemy have in many instances not marked the graves of British officers and men buried within their lines a number of graves will be irretrievably lost. In some cases even within our own lines, though graves have been marked the position is too exposed for a correct plan and survey to be made; in others every trace of a burial-ground having been obliterated by the enemy's shell fire there is no hope of reconstructing the cemetery so that individual graves may be recognized. Again, during heavy fighting burials are often carried out under circumstances which make it impossible to take, or at any rate to transmit, an accurate record of the position of the graves.

Early in 1915 it became necessary to make definite arrangements with regard to the provision of land in France for the burial

* This document is dated at London January 23, 1917.

of British officers and men. Up till then, and particularly during the retreat and the subsequent advance to the Aisne, burials had often taken place in isolated graves which were, wherever practicable, cared for with reverence and respect by the French peasants and owners of land, and in a few cases, permanent concessions of land were offered. By this time, however, French civil cemeteries were being more regularly used and it was also possible to arrange for special burial grounds. The Director of Graves Registration and Enquiries approached the French Government through the French Military authorities, on the matter. The French Government immediately expressed the desire to provide land for permanent resting places for British officers and men at the cost of the French Nation, and a law was passed which gave effect to this generous impulse, on December 29th, 1915. Since then, in co-operation with the French Army, the Directorate has established authorised burial grounds immediately behind the British front and near the Field Ambulances, the Casualty Clearing Stations and the Hospitals further back. Soldiers are employed under the Officers of the Graves Registration Units, to look after these burial grounds. In the case, however, of a battle or severe fighting isolated burials necessarily still take place.

The French Government further offered to maintain these Cemeteries. The British Government has, however, in agreement with the French Government, undertaken to provide for their maintenance in perpetuity and has appointed a National Committee to care for the graves of our officers and men after the war. With the King's consent the Prince of Wales has accepted the Presidency of this Committee.

Relatives are requested to facilitate the work of this branch of the Army (a) by addressing as few enquiries as possible to the Directorate and (b) by realising that pressure of work, and not want of sympathy, will often necessitate a brief reply on a printed form. On the other hand, the work will be assisted if relatives send to the Director any information they possess as to the place of burial, giving at the same time name, rank, regiment and regimental number, if any, of the deceased, and date of death. It is not intended, unless circumstances should show that it is desirable, to make arrangements for dealing with enquiries made in

person. Relatives are therefore requested to confine themselves to written communications, which should be addressed to

DIRECTOR OF GRAVES REGISTRATION AND ENQUIRIES,
War Office,
Winchester House,
St. James's Square,
London, S. W.

Much unnecessary correspondence will be saved if relatives will carefully note the following facts:

1. Some time may elapse after burial before the graves have been properly registered and marked and the position accurately recorded. As soon as this is done a notification will be sent to the next of kin. The notification may be taken as final verification or correction of information received from other sources.

2. It is not possible to arrange for the distribution of flowers, plants or wreaths for individual graves, but the cemeteries as a whole, are grass-sown and planted with flowers and shrubs, where military conditions allow, under the advice of the Director of the Royal Botanic Gardens, Kew. Their maintenance is under the supervision of Officers of the Graves Registration Units.

3. Photographs of such graves in France and Belgium as are accessible to the photographers employed for the purpose are furnished to relatives on application, free of cost, out of funds placed at the disposal of the Directorate, for this object as well as for the planting of burial grounds, by the Joint War Committee of the British Red Cross Society and Order of St. John. All applications are carefully noted and photographs are sent as soon as possible, but it will be understood that in many cases weeks or months may pass before photographs can be taken.

A number of subscriptions to these funds are still being received by the Director of Graves Registration and Enquiries, War Office. Those who send such subscriptions are therefore reminded that any sums which it is desired to devote towards the cost of photographs and the planting of cemeteries should be addressed "Graves Fund, Joint War Committee of the British

Red Cross Society and the Order of St. John, 83, Pall Mall, London, S. W. 2.

At the end of the war, any balance which remains to the credit of that fund will be handed over to the Prince of Wales' Committee for the care of soldiers' graves to be used for the erection of Permanent Memorials.

4. Circumstances not infrequently arise which make it undesirable in the interests of the military situation to disclose the position of a grave although it has been duly registered and recorded.

5. Many considerations, among which is the desire felt at the front to avoid inequality of treatment, have made it necessary to forbid the erection of any permanent memorials during the progress of hostilities; the sending of crosses to France is also prohibited as all transport is required for material of war.

6. The exhumation of bodies during the war is strictly forbidden by both the French and British Military authorities.

7. Owing to the great difficulties that exist in Mesopotamia and East Africa, due to local and climatic conditions, the proper registration and marking of graves will necessarily be a lengthy and difficult problem and it is not possible at present to make arrangements for taking photographs.

(Signed) Fabian Ware,
Brigadier-General,
Director of Graves Registration and Enquiries.

War Office,
January 23rd, 1917.

Document No. 3 *

## DIRECTORATE OF GRAVES REGISTRATION AND ENQUIRIES

The following Instructions regarding the burial of the dead and the duties of the Graves Registration Units are published for the information for all concerned.

FABIAN WARE,
Brigadier-General,
Director of Graves Registration and Enquiries.

General Headquarters,
30th June, 1917.

These Instructions deal with:—

I.— The Organization of the Commission of Graves Registration and Enquiries.
II.— The Selection of Sites for Cemeteries.
III.— Burial and the Marking of Graves.
IV.— Reports and Correspondence.
V.— Plans of Cemeteries.
VI.— Horticulture.
VII.— Photography.
VIII.— The Control of Cemeteries.

### I.—ORGANIZATION OF THE COMMISSION OF G. R. & E.

#### G. R. O. 1437: Position and Duties of D. G. R. & E.

The position and the duties of the Director of Graves Registration and Enquiries are determined by the first part of General Routine Order 1437 of 3rd March, 1916, which is reprinted:—

"*Burial Grounds.*— 1. The Director of Graves Registration and Enquiries, as representative of the Adjutant-General, is the sole intermediary between the British Army in the Field and the French Military and Civil Authorities in all matters connected with the French Law of 29th December, 1915.

* This document is dated at London, June 30, 1917.

"In Belgium he will act in a similar relation with Belgian Military and Civil Authorities.

"He is responsible for the selection of sites for burial grounds for British officers and men and for the control and supervision of cemeteries, as well as for the work of the Directorate."

### Organization of Commission of G. R. & E.

The present organization of the Commission in France and Belgium is determined by the Adjutant-General's G. R. 1/11 of 23rd May, 1917, which is reprinted:—

"The Graves Registration Units will in future be divided into (a) Mobile Units operating in the Army areas, and (b) Stationary Units operating on the Lines of Communication and in such back parts of the Army areas as may from time to time be decided.

"One Stationary Unit will be allotted to the Lines of Communication and one Mobile Unit to each of the Armies. The Stationary Unit will be mainly concerned with the permanent upkeep and laying-out of cemeteries, so that they may be handed over to the Imperial War Graves Commission on the conclusion of hostilities in a satisfactory state.

"These units will be under the control of the Army Commanders and G. O. C. Lines of Communication area respectively.

"All instructions regarding technical details, such as the registration and marking of graves, the selection, planning, upkeep, and control of cemeteries, photographing of graves, planting of flowers and shrubs, memorials, commemorative ceremonies, will be issued by the Director of Graves Registration and Enquiries, General Headquarters (2nd Echelon), either direct or through Inspectors, to the Officers Commanding Stationary or Mobile Graves Registration Units.

"Inspectors will report to the Director of Graves Registration and Enquiries any irregularities in the carrying out of these instructions, and will be available to be consulted by Army Commanders and G. O. C. Lines of Communication area on such questions as the distribution of Graves Registration Units, Sections and Sub-sections.

"There will be an Inspector for the Stationary Units, and an Inspector for each of the two groups of Mobile Graves Registration Units, i. e., Northern Group (First and Second Army Units) and Southern Group (Third, Fourth and Fifth Army Units).

"All officers of Stationary and Mobile Graves Registration Units will be posted by the Director of Graves Registration and Enquiries, General Headquarters.

" Cemeteries which are no longer used for burials, and such other cemeteries in the back areas of Armies as may be decided, will, from time to time, by arrangement between the Army Commanders and the Director of Graves Registration and Enquiries, be transferred from Mobile Graves Registration Units to the Stationary Graves Registration Units; and in the same way Working Parties, to be inspected by the Inspector of Stationary Units, will be employed for making up isolated graves in the back areas of Armies.

"All horticultural work will be confined to the Stationary Graves Registration Units and Working Parties.

" These changes will take effect as from 30th May, 1917."

The table printed as Appendix shows the division of the work of Graves Registration and Enquiries in France and Belgium between the various branches of the Commission.

## II.— THE SELECTION OF SITES FOR CEMETERIES

### G. R. O. 1437: New Sites

The selection of sites is governed by the second part of General Routine Order 1437 of 3rd March, 1916, which is reprinted:—

" 2. When new land is required for burial grounds in a Corps area or on the Lines of Communication, the G. O. C. Corps or the Base Commandant or Administrative Commandant concerned will, through the Army Commander or G. O. C. Lines of Communication area, inform the Director of Graves Registration and Enquiries, General Headquarters, and will detail an officer of the "A" Branch of the Staff or some other officer specially acquainted with the local military conditions to advise in selecting sites suitable for the purpose.

" The instructions issued under General Routine Order No. 1104, dated 26th August, 1915, are cancelled."

(12191r.) Wt. G. 9727. 2000. 7/17. D & S. G. 2. P. 17/450.

### Law of 29th December, 1915

The provision of the French Law of the 29th December, 1915, by which the French Nation generously decided to acquire and hold in perpetuity the cemeteries in which the Allied dead are buried, may be summarized as follows:—

*Article 1.* When in order to provide the permanent resting places which will have to be secured for soldiers of the French or Allied Armies who are killed or die of wounds or sickness during

the war, it is necessary to acquire lands outside existing cemeteries, the acquisition will be made on behalf of the Nation by the Minister of War.

*Article 2.* If the position of the land has been chosen after a favourable report from a member of the local Sanitary Commission or the Departmental Council of Hygiene delegated by the Prefect, and with the consent of the Municipal Council, it will be authorized by a preferred order without any other formality.

*Articles 3, 4 and 5* deal with technical questions and the machinery of acquisition.

*Article 6.* The cost of acquisition, occupation, enclosure and upkeep of lands required for cemeteries to which this law applies are borne by the Nation. Nevertheless, the upkeep of these cemeteries may be entrusted at their request to municipalities or to societies regularly formed, whether in France or in Allied countries, on terms to be agreed on between the municipality or society and the Minister of War.

(From Circular Memorandum D. G. R. & E. of 3rd March, 1916.)

It is the duty of Officers Commanding Graves Registration Units to report fully to the Inspector as soon as it becomes likely that a burial ground will have to be extended or a new burial ground opened.

### Requirements for New Sites

The following points should be kept in view when selecting sites for new cemeteries, as being those which will best enable the selections to conform with the requirements of the Law of the 29th December, 1915:—

(1) The site should be at least 100 metres from the nearest buildings or ruins and preferably on the lower side.

(2) The situation should not be such as to contaminate any water supply.

(3) The site should be easy of access from the nearest road.

(4) The site should be in such a position and of such a shape as to interfere as little as possible with the use of land round it; for example, a corner of a field should be selected, and not the centre.

(5) The site should not obstruct any existing road, path, or right of way.

(6) The site should be selected with a view to economy, bearing in mind that the owners of the land will subsequently have to be compensated for the area acquired for cemetery purposes. For example, as little frontage along the road as possible should be taken. Where there is any choice of land, the poorer quality should be selected rather than the better quality, and arable land rather than pasture. Where possible, attention should be paid to parcel boundaries, which may usually be distinguished by differences of cultivation.

### Procedure of Obtaining Approval

Whenever circumstances permit, the Inspector will invite the local delegate of the Prefect of the Department under the law of 29th December, 1915, to accompany him to the site selected for a new cemetery and will obtain his written opinion. If the cadastral plan is still to be found in the Commune, he will have a tracing made from it showing the site and its surroundings, and also an enlarged plan of the cemetery on the scale of 1/500. Should the cadastral plan not be obtainable the Inspector will refer the matter to D. G. R. & E., General Headquarters, 2nd Echelon, for instructions. The site should be fenced in as soon as possible, to ensure the accuracy of the enlarged plan.

The delegate's opinion and the plans will be forwarded without delay to D. G. R. & E., General Headquarters, 2nd Echelon.

An application will then be made by D. G. R. & E. (Land Department) to the Maire of the Commune, either direct or through the Inspector, for a "deliberation" of his Municipal Council approving the site. The matter will then be submitted by D. G. R. & E. in the proper form to the Franco-British Military Graves Commission, or other corresponding Commission, appointed by the French Ministry of War and composed of French and British Officers. If this Commission approves, acquisition is then carried out by the proper French authorities.

A circular, issued by the French Minister of War on 17th February, 1916, outlines the procedure applicable to all Military Cemeteries in France under the Law of 29th December, 1915. This procedure for cemeteries in the zone of the British Armies is now as follows:—

Sites approved by the Director of Graves Registration and Enquiries are submitted to a mixed Commission, presided over by an officer of the French Mission representing the French Commander-in-Chief. The other members are representatives of the local French Engineer and Sanitary Services and of the Directorate of G. R. & E. This Commission examines the plans of each cemetery, satisfies itself of the consent of the sanitary delegate and the Municipal Council and, if all the necessary conditions are fulfilled, approves the choice made. The matter is then referred to the Ministry of War for approval. When this is given the papers are returned to the local Engineer Services, who obtain the prefectorial order mentioned in Article 2 of the Law of 29th December, 1915, and then take the necessary steps to acquire the land by purchase if the owner is willing to sell or by expropriation if he is unwilling.

## III.—BURIAL AND THE MARKING OF GRAVES

### (1) General Instructions

Burials of British soldiers (except in the area of heavy fighting) are governed by paragraphs 1 to 13 of the Adjutant-General's "Instructions to Chaplains," dated 17th April, 1916, and amended 20th June, 1917, which are reprinted:—

*"Location and Registration of Graves*

"1. All funerals of officers and other ranks are to be reported at once on Army Form W. 3314 in triplicate, one copy to 'Director of Graves Registration and Enquiries, War Office, Winchester House, St. James's Square, London, S. W. 1,' one to the O. C. Graves Registration Unit of the Army in which the Chaplain is serving, and one to D. A. G., G. H. Q., 3rd Echelon. Burial forms (Army Form W. 3314) and the envelopes with the first and last of the above addresses printed on them can be obtained from the Army Printing and Stationery Depots.

"All entries on any one A. F. W. 3314 must refer to the same place and be covered by a single map reference. Burials at different places must be shown on separate A. F. Ws. 3314.

"2. Map references must be the 1/40,000 map.

"If a correct map reference cannot be given, a full description of the place must be entered on the back of the form. A description of the cross used is to be shown on the form where stated.

"3. In all cases Chaplains are responsible that particulars of name, initials, regimental number, unit, and date of death (wher-

ever possible) correspond with the entries shown in the books of the Unit reporting the death.

"At the time of burial the graves must be marked in such a way as to insure identification. Chaplains are responsible that, even in cases where the Unit proposes to erect a cross, the grave is properly marked by other means until this is done. Pegs with labels attached are supplied for the purpose.

" Chaplains are responsible that the particulars referred to in para. 3 are entered on these labels with hard black lead-pencil. Indelible pencils are not to be used for this purpose. These pegs are to be fixed in the ground at an angle of 45°, with the labeled side underneath, to protect the label from the weather.

" 5. In authorized cemeteries under the charge of the D. G. R. & E. a box containing pegs will be kept by the soldier in charge. Chaplains attached to dressing stations or ambulances, or when accompanying burial parties near the front after heavy casualties, should see that a supply of pegs and labels is available.

" 6. In special cases where the eventual erection of crosses may be difficult or delayed, a record written with hard black lead-pencil is, in addition, to be placed in a tin or bottle (neck downwards) half buried in the ground. Where one tin or bottle is necessarily used to mark several graves, the record enclosed must be so marked as to ensure the proper identification of each grave.

" 7. Chaplains, immediately upon arrival in an area, are to acquaint themselves fully with all the authorized cemeteries in that area. Information as to this and other matters should be obtained from the office of the Graves Registration Unit, the address of which may be ascertained at Army, Corps or Divisional Headquarters.

" 8. In authorized cemeteries, numbered pegs are now being placed to show where graves are to be dug. These numbers should be shown on the burial return as graves are used. Chaplains are to call the attention of the Officer commanding the Graves Registration Unit in whose area the graves concerned are situated, to any cases which may come to their notice of graves being prepared out of order, or in the wrong place.

" 9. Under no circumstances are crosses erected or registered by the Graves Registration Units to be removed or altered without authority from the D. G. R. & E.

" 10. Where a Unit desires to erect a cross over a grave on which a Graves Registration Unit cross is already in position, the latter should be used as a foot cross, being driven deep into the ground.

"11. Chaplains are to bring to the notice of the Officer Commanding the local Graves Registration Unit all mistakes either in position or inscription of crosses which may come to their notice.

"12. It is greatly to the interest of all concerned, and particularly of the relatives of deceased officers and men, that *authorized cemeteries* should be used whenever possible, in order to ensure the preservation of graves in the future.

"13. Burial parties should be informed that where burials take place in single graves the graves should not be more than 6 feet 6 inches long, 2 feet in width and 5 feet in depth, and should not be more than 12 inches apart; and a path not exceeding 3 feet in width should be left between the rows of graves."

*Duties of Other Officers*

Other Officers conducting burials, not in the area of heavy fighting, are to render the same returns as Chaplains (see page 26 of "Extracts from General Routine Orders, Adjutant-General's Branch," dated 1st January, 1917).

F. G. C. M.

It is laid down by the Adjutant-General's D/1972/24 of 30th September, 1916, that:—

"There is no rule that any man who has suffered the extreme penalty of the law should be buried near the place of execution.

"Any man who suffers the extreme penalty of the law may be buried in a cemetery, the inscription being marked 'Died' instead of 'Killed in Action' or 'Died of Wounds.'"

The term "Cemetery or Communal Cemetery" is used in these instructions throughout as including churchyards.

**(2) Heavy Fighting**

Burials of British soldiers in the area of heavy fighting are governed by the Adjutant-General's D/1972/6 of 13th August, 1916, and C/104 of 2nd March, 1917, and 21st March, 1917, and by Circular Memorandum D. G. R. & E. 8 of 2nd March, 1917, which are reprinted:—

*Adjutant-General's D/1972/6 of 13 August, 1916*

"During the recent heavy fighting experience has shown that it is extremely difficult for burials to be carried out so as to ensure the satisfactory marking and registration of graves by the Graves Registration Units.

"The instructions which have been issued to Chaplains and others conducting burials have been found adequate for the purpose during the ordinary trench warfare.

"When any heavy fighting is anticipated, where it will be necessary for burials to be carried out by burial parties, one officer per corps should be detailed who will be responsible for seeing that the Officers Commanding burial parties in his Corps receive proper instructions as to the arrangements which should be made in order to ensure the permanent identification of graves.

"This officer, who need not be fit for duty in the trenches, will ascertain from the Officer Commanding the Graves Registration Unit working in the area what steps it is necessary to take at the time of the burial, so that the Graves Registration Units may subsequently complete the marking and registration of the graves, so that the killed may, wherever possible, be identified.

"The fact is recognized that, owing to the military situation, it is sometimes difficult to mark graves properly, but, on the other hand, it is most essential that this should be done, and it is thought that the arrangement now ordered will ensure that the graves of our soldiers will be more easily recorded."

*Adjutant-General's C/104 of 2d March, 1917*

"1. In continuation of my letter No. C/104, dated 25th January, 1917, it has now been decided that it is inadvisible to increase Salvage Companies for the purpose of undertaking the burial of the dead.

"2. Wherever possible, Divisions should carry out their own burials; but there will be occasions on which this will be impossible, or labour will be required to supplement that found by Divisions.

"3. Some organizations must be ready for this purpose, for the matter can no longer be left to the chance possibility of casual labor.

"4. In future, therefore, Armies will earmark labour for this purpose from among the Labour Companies at their disposal. This must be done some time before operations commence, and the various Corps Burial Officers (see my D/1978/6, dated 13th August, 1916) must be informed of the Labour Companies so earmarked, in order that they may get into touch with the Officers Commanding Companies.

"5. Corps Burial Officers will explain to Officers Commanding Companies the system and what will be required should the Labour Companies be definitely detailed.

"6. Labour Companies will, of course, continue to carry out their normal work until actually required, and after the burial work required of them is completed they will resume their normal duties.

*Adjutant-General's C/104 of 21st March, 1917*

"In continuation of my letter No. A. G.–C/104, dated 2nd March, 1917, all special lists of burials made under the circumstances therein referred to are in the nature both of burial returns and notification of death.

"Copies of these lists should therefore be sent immediately to D. A. G., General Headquarters, 3rd Echelon, as well as to D. G. R. & E., War Office, Winchester House, St. James's Square, London, S. W. 1."

*Circular Memorandum D. G. R. & E. 8*

"With reference to the A. G.'s Memorandum to Armies, No. D/1972/6 of 13th August, 1916, regarding burials under exceptional conditions due to heavy fighting, the following are the steps it is necessary to take at the time of burial so that the Graves Registration Units may subsequently complete the marking and registration of the graves, and that the killed may, wherever possible, be identified. These will be communicated to the officer detailed by each Corps under the above-quoted A. G.'s Memorandum by the O. C. Graves Registration Unit in the Corps area.

"1. The identification of bodies should generally present little difficulty, when all officers and men have been provided with two identity discs (Army Order No. V of 24th September, 1916). When, however, the Identity Disc No. 1 Green is not found on a body (with which it is to be buried) other evidence of identification should, whenever possible, be noted, e. g., regimental badges, tabs and measurement and description of body.

"2. A record will be kept giving the name, regimental number, rank, regiment and battalion and date of death (or where these cannot be ascertained the evidence of identification referred to above) of each body buried and the exact position of the grave, if possible, with reference to woods, houses, cross roads, kilometre stones, &c.; where trenches are used a number indicating the position of each body in the different rows should, when possible, be given, stating at which end of the trench, by reference to the points of the compass, the series of numbers begins.

"3. Copies of these records or lists of burials should be sent immediately to (1) D. A. G., General Head Quarters, 3rd Echelon, and (2) D. G. R. & E. War Office, Winchester House, St. James's Square, London, S. W., and arrangements will also be made so that a copy may be obtained without delay by the O. C. Graves Registration Unit in the Corps area.

"4. Wherever it is possible bodies should be collected in one or more convenient spots. During heavy fighting this will often prove impossible, but it is of great advantage, as, if the site selected be a suitable one it may ultimately be acquired permanently by the French Government under the law of 29th December, 1915; there would then be no necessity for removing the bodies later on.

"5. Various systems of marking graves are being employed by burial parties. The essential conditions to satisfy are that the marks should be easy to pick up by the Graves Registration Officers, and that they should bear some divisional or other sign distinctive of the burial party.

"When bodies are buried in trenches, each end of the trench should be clearly defined by a substantial mark, trenches should be five feet deep and six feet six inches wide.

"Wherever it is necessary for any marking to be done in pencil, a very hard pencil using pressure, should be employed. Indelible pencil will not stand the weather.

"Note.— The A. G.'s Memorandum D. 1972/6 refers only to heavy fighting and burials carried out by Burial Parties. *In all other cases the regular procedure as to the rendering of Burial Returns will be observed.*

*Duties of Chaplains*

Paragraphs 14 and 15 of "Instructions to Chaplains" are material and are reprinted:—

"14. *Notes on Burials during an advance or heavy fighting.*

"The foregoing instructions present little difficulty during trench warfare; but in an advance or during heavy fighting it is essential that every Chaplain should keep himself in touch with the Corps or Divisional Burial Officer, and follow out the instructions laid down by him or the Corps or Division Headquarters as regards the burial of officers and men.

"No Chaplain should decide on a plan for the burial of deceased officers and men without first endeavouring to obtain the authority of the Corps or Divisional Burial Officer.

"15. Bodies of officers and men of (1) our own forces, (2) our Allies, and (3) the enemy, will be collected separately and buried in separate plots.

*Co-operation of Mobile Units and Burial Officers*

Officers of Graves Registration Mobile Units should confer as fully as possible with Corps and Divisional Burial Officers, and become thoroughly conversant with the burial schemes adopted in their areas. Close co-operation is essential for the successful registration of graves in advanced positions.

### (3) Other Nationalities and Religions

The following special instructions apply to the graves of other races and religions:—

*French*

Circular Memorandum D. G. R. & E. 5 of 6th March, 1916, is reprinted:—

"Officers Commanding Graves Registration Units are reminded that all French soldiers' graves in their areas, whether isolated or in cemeteries, should receive the same reverent care and attention as the French Armies have invariably bestowed upon the graves of British soldiers in areas occupied by them."

*Portuguese*

Portuguese officers and men will be buried in the same cemeteries and in the same manner as the British; but where circumstances permit, and there is a reason to expect a considerable number of burials, separate plots will be provided.

*Indians*

No Indian should be buried in a French Communal Cemetery except in cases where there is a plot specially set aside for Indian graves. In back areas every effort should be made to bury in existing Indian cemeteries and not to start new ones. Indians are not to be buried in the same plot as Christians, but in separate enclosures.

Under no circumstances should a cross be erected over an Indian grave. Stakes are provided to take their place. Officers of Graves Registration Units will be responsible for reporting immediately any departure from this order, giving the name of the person who

caused the cross to be erected. (See Circular Memorandum D. G. R. & E. 12 of 23rd March, 1917.)

The same return will be rendered in the case of Indian soldiers as in the case of British.

*Jews*

The graves of British officers and men of the Jewish faith will be marked with double triangles on stakes and not with crosses; but no Jewish memorial will be erected without the previous authority of the D. G. R. & E., London. In cases where a regimental cross is already in position on a grave subsequently accepted as being that of an officer or man of the Jewish faith, the cross will be placed near the foot of the grave, the double triangle being erected on the grave at the head. In such cases a Graves Registration Unit cross will be removed altogether.

Information has been received from the French Ministry of War that there is no objection to the placing of special memorials on the graves of French soldiers of the Jewish faith; but it is requested that such memorials should be erected only on graves within the British Army area, and in cases where the application for the erection of such a memorial has been made by the family of the deceased soldier to the French Ministry of War (Bureau des Renseignements aux Familles) and notification to this effect has been received from D. G. R. & E.

*Chinese*

Similar rules to those for Indian burials apply to burials of Chinese; but Chinese are not to be buried in an Indian cemetery.

The same return will be made as in the case of British soldiers, but by the O. C. the unit to which the dead man belonged.

*Egyptians*

The burial of non-Christian Egyptians will be governed by the instructions given for that of Indians, except that the graves must, if possible, be dug by Egyptian labour; and similar returns will be rendered.

*Kaffirs*

Kaffirs will be buried in the same cemeteries and in the same manner as British soldiers, but separate plots will be provided.

Similar returns will be rendered.

*Enemy Graves*

Circular Memorandum D. R. G. & E. 11, dated 22nd January, 1917, which deals with enemy graves, is reprinted:—

"The attention of Officers Commanding and all officers of the Graves Resignation Units is drawn to the decision that all enemy graves should be marked, registered and recorded in the same way as those of British and Allies.

"While British graves and those of the Allies have, naturally, the first claim on the services of all concerned, everything possible should be done to tidy up the German cemeteries (particularly on the Somme front) which have been disarranged by shell fire, and to replace crosses which have been damaged."

*Generally*

Subject to the foregoing instructions it is not desirable that a separate plot should be reserved for members of any particular denomination.

**(4) Provisional and Memorial Crosses**

Cases sometimes occur in which it is desirable to erect a cross, but the ordinary form of inscription would be misleading. These cases are dealt with in Circular Memorandum D. G. R. & E. 9, dated 9th December, 1916, and D. G. R. & E. 10, dated 9th January, 1917, which are reprinted:—

*Provisional Crosses*

"1. In cases where very strong but not conclusive evidence is considered to exist in favour of erecting a cross to a particular officer or man, authority will be given by the Director for the erection of a provisional cross. The inscription on such graves will begin with the words 'Believed to be' on a separate line.

"2. In any case where doubt is felt by an Officer of the Graves Registration Units as to the strength of the evidence in favour of erecting a cross, the O. C. unit will report the matter to the Director G. R. & E., London, and ask for instructions.

"3. Provisional crosses must be reported in the form of minutes and not included in ordinary grave reports.

"4. In no case may any provisional cross be erected except on instructions from the Director."

*Memorial Crosses*

"There is no objection to the erection of memorial crosses to officers and men whose bodies it has been found impossible for whatever reasons to bury, subject to the following conditions:

"1. Any memorial erected must carry on the face of it evidence that it is a memorial and does not mark an actual grave.

"2. It should be erected in the nearest authorized cemetery and not on the scene of action or elsewhere.

"3. It should be erected by the officers of the Graves Registration Units rather than by fighting unit concerned, and particularly in the case of memorials to more than one.

"4. If the fighting unit concerned strongly desires to erect the memorial, the name or a list of the names to be included, and a statement of the wording of the proposed inscription, should be previously submitted to and approved by the Director of Graves Registration and Enquiries.

"5. Any memorial erected must be made of wood, and be of a temporary character.

"6. It is important that economy should be observed in the use of land for the erection of memorials."

### (5) Correction of Inscriptions

The correction of inscriptions on crosses is dealt with in O. C. G. R. Units Instructions, dated 2nd April, 1917, which are reprinted:

"Regarding the correcting of inscriptions on crosses it should be borne in mind that it is most advisable that crosses should be erected and marked as soon as possible in such a way that identification may be established.

"Officers of the Graves Registration Units are reminded that it has been decided that: The D. A. G., 3rd Echelon, is the final authority during the continuation of hostilities for deciding what is the correct inscription to be placed on the grave of an officer or man, and information obtained from other sources must not be regarded as being without possibility of error.

"D. G. R. & E. is responsible to the A. G. for seeing that actual inscriptions on crosses agree with those authorized by the D. A. G., 3rd Echelon.

" Corrections in a great many cases naturally become necessary, and are to be dealt with as follows:

" 1. Where the error is such as to render identification difficult or in danger of becoming lost (such as a wrong name, number or battalion) it should be dealt with immediately.

" 2. Where the error may give rise to a confusion and loss of time in establishing identification (such as wrong spelling of name only, or wrong number only, but correct battalion, date, etc.), it should be dealt with as soon as circumstances permit.

" 3. Where the error is trifling (such as only a letter wrong in the name, or one cipher wrong, or wrong date, but battalion correct), it may be left until our work on its present basis is terminated and it can be dealt with without interfering with more serious duties.

" Instructions will be given by D. G. R. & E. in each case in accordance with the above, and without these instructions corrections are not to be undertaken."

## IV.— REPORTS AND CORRESPONDENCE

### (1) Graves Report

The present system of Graves Reports is settled by Circular Memorandum D. G. R. & E. 4, dated 6th March, 1916, and a series of minutes, and may be summarized as follows:

Information as to the location of graves is obtained by the following means:

(a) Returns from Chaplains on Army Form W. 3314 in accordance with " Instructions to Chaplains."

(b) Returns from officers conducting burials in accordance with the Adjutant-General's " Instructions to Officers."

(c) Returns from Medical Units.

(d) Lists of burials on battlefields obtained from Corps, Divisional and other Burial Parties. (See Circular Memorandum D. G. R. & E. 8, pages 8 and 9.)

(e) Letters from Mayors of Communes and other French authorities, letters and miscellaneous information which may reach the Director of Graves Registration and Enquiries.

(All the foregoing, when used as evidence on which to report the location of a grave, are called " Authorities.")

(f) Searching either by Graves Registration Unit Officers or by working parties engaged in clearing up battlefields. (In this case there will be no written authorities, but any inscription or any other mark of identity that may be on the grave will be the "Authority.")

As soon as a grave is found a cross should be erected without waiting for written authority. If, for example, a grave is found with a peg placed on the grave by a Chaplain in pursuance of paragraph 4 of "Instructions to Chaplains," the cross should be erected as soon as possible, without waiting for the Chaplain's return to come in.

Immediately a cross is erected or a plate affixed to an existing cross the graves must be reported to D. G. R. & E.

All graves must be reported on Army Form W 3372, except the graves of French troops, which are reported on an unofficial form provided for that purpose.

All reports must be made by Communes, and each burying place in the Commune must bear a separate permanent report number with the schedule (that is, the pages of the report) bearing a consecutive number. The first report of graves found at Gunners' Farm Cemetery, in the Commune of Ploegsteert, will be headed:

(Army Serial Number.) Commune Ploegsteert. Report No. 1. Schedule No. 1. Gunners' Farm Cemetery.

All subsequent burials in Gunners' Farm Cemetery will have the same heading save that each schedule takes the next consecutive number, so that the second schedule of the report would read:

(Army Serial Number.) Commune Ploegsteert. Report No. 1. Schedule No. 2. Gunners' Farm Cemetery.

The first report of graves found in Canadian Cemetery (Strand), which is also in the Commune of Ploegsteert, would read:

(Army Serial Number.) Commune Ploegsteert. Report No. 2. Schedule No. 1. Canadian Cemetery (Strand), and subsequent reports would bear the same heading, except that each schedule takes the next consecutive higher number, as before.

Every report will bear an Army Serial Number.

*Portuguese graves* are reported in the same way as British graves, but on separate schedules, numbered independently of the

British schedules, and bearing the letter " P " after the schedule number.

*Enemy graves* are reported in the same way as British graves, but on separate schedules, numbered independently of the British schedules, and bearing the letter " Z " after the schedule number. In every case the report number is permanent for graves of any nationality at the same place.

All reports should be typed and should contain a reference to the 1/40,000 map. If no 1/40,000 map of the area exists, any other British Army map should be quoted. The names should be typed in blocks of four to assist the London office in copying the names on to the card index slips, which are made up in sheets of four. Where abbreviations for the names of British regiments are employed on crosses, in reports or in references, Army List abbreviations must be used. Names of cemeteries must be given exactly as in the official list of cemetery names supplied to Graves Registration Units by the D. G. R. & E., and opposite each grave reported in a cemetery should be put (in cases where these can be given) its plot number, row letter and grave number.

In any case where a cross has been erected the letter " E " should be inserted in column six of A. F. W. 3372, and where a plate has been affixed to an existing cross the letters " G. R. U."

In the Mobile Units, the Section Officer should prepare the reports in indelible pencil in a Field Book, keeping a carbon copy. The original should be sent to the Headquarters of the Unit, where four copies will be typed; two copies will be filed in the Unit Office (one under the Army Serial Number and one under the Commune) and two copies sent to the D. G. R. & E., War Office, Winchester House, St. James's Square, London, S. W. 1.

If the name of the Commune is not definitely known, three copies should be sent to D. G. R. & E., with the name of the Commune left blank, and one copy will be returned to the Unit with the name of the Commune filled in.

All reports sent to D. G. R. & E. should be accompanied by the authorities on which the reports are made, and on each authority should be written the Army Serial Number of the report.

The rule which governs Graves Registration is that no grave should be reported until a Graves Registration Officer or a responsible N. C. O., acting under his orders, has visited the grave, is

reasonably satisfied of his identity, and has either erected a Graves Registration Unit cross or affixed a plate bearing the letters "G. R. U." to an existing cross; but in practice this is not always possible, and accordingly the following exceptions are allowed:

(a) When it is, in the opinion of the O. C. Unit, inexpedient at the time of the first visit to the site of the grave to affix the G. R. U. label and it is desirable to report the names at once, the 6th column of A. F. W. 3372 should be left blank and the report marked "G. R. U. to be affixed later." A copy should be kept by the unit, and as soon as the graves are marked, this copy should be sent in with "Graves now marked" written across it.

(b) A cross has been prepared in response to a written request from a Corps or Divisional Burial Officer, giving the place in which the man has actually been buried, and despatched to the place named or given to the messenger sent for it. The letter "D" should be inserted opposite such graves in the 6th column of A. F. W. 3372.

Officers commanding Units must satisfy themselves that the crosses sent out are sent to persons who will erect them as soon as an opportunity occurs.

No cross must be sent or given out unless a written request giving full details, signed by or for a Corps or Divisional Burial Officer, is received.

*Comprehensive Reports*

When a cemetery has been in use for some time and plots have been completed, the crosses should be carefully checked against the existing reports and any mistakes discovered (such as omissions or duplication of crosses) should be rectified, and one report of the completed plots up to date, called a Comprehensive Report, should be prepared.

Where all the names in a previous report are contained in a Comprehensive Report, the Comprehensive Report should be marked, "This cancels Nos. ————" and the earlier reports should be marked on the file copy, "Cancelled by Report No. ———."

The report number will be the same that is already used for the location in question, and the schedules will be numbered 1C, 2C, and so on.

One copy of the Comprehensive Report will be forwarded to the Inspector.

### (2) Weekly Reports

Each O. C. Unit will prepare a weekly report on the work of his Sections, which will be submitted to the Inspector each Monday morning, for transmission to the D. G. R. & E., General Headquarters, 2nd Echelon.

This report should consist solely of a simple and concise statement of the technical work of the Sections during the previous week. Any relevant suggestions, complaints, requests, etc., should form the subject of a separate communication in minute form.

### (3) Correspondence

Correspondence on all questions referring to the military administration of Units, the relation of Units to the Armies, Corps, etc., in whose area they are working, supply, transport, discipline, promotions of N. C. O's, etc., will be addressed to the branch concerned of the Army in which the Unit is serving; and all such communications will be made by the O. C. the Unit only.

All questions regarding technical matters will be addressed in minute form to the Inspector of the Group in which the Unit is serving, who will submit to D. G. R. & E., General Headquarters, 2nd Echelon, such matters as he is not empowered to deal with himself. Section Officers will render their reports of graves daily in manuscript on sheets of their Field Books (keeping a carbon copy of each) to the O. C. Unit, who will be responsible that these are typed and forwarded immediately to the Director of Graves Registration and Enquiries, War Office, Winchester House, St. James's Square, London, S. W. 1. All correspondence from Section Officers will be written in Field Books. A simple in and out register or index will be kept of this correspondence.

All reports, grave reports and returns will be despatched daily direct to D. G. R. & E., War Office, Winchester House, St. James's Square, London, S. W. 1, by the Unit, and Officers commanding Units will reply direct to D. G. R. & E. in answer to all communications addressed to them by D. G. R. & E.

### (4) Enquiries from D. G. R. & E.

All enquiries will be addressed by D. G. R. & E. (whether from London or from General Headquarters) to the Officers Commanding the respective Graves Registration Units, and they will be responsible for obtaining the information from their Section Officers and reporting it to D. G. R. & E.

In cases where an enquiry is received by a Unit regarding a grave which is outside its area, the O. C. Unit will be responsible for passing this at once, through his Inspector, to the Unit concerned, who will deal with it as if they had received it direct.

Enquiries from the Director's Office in London necessitating personal examination of graves will be sent in triplicate to Officers Commanding Units, who will, if they think a Section Officer can with reasonable safety visit the places in question, transmit two copies to him.

If they think the place should at the time be considered inaccessible, they will return one copy to D. G. R. & E., London, marked "Inaccessible," and return the others in case of the locality becoming accessible at a later date.

### (5) Enquiries from Private Sources

Any information obtained as to sites of graves is forwarded, under the instructions of the Adjutant-General, to the War Office, for communication to the next of kin. The forwarding by individual officers and men of the Graves Registration Units to persons at home of any information obtained by them in the course of their duties or accessible to them by reason of their position is a definite breach of trust even though, as is often the case, the information is not within the categories prohibited by the ordinary censorship regulations.

When a private enquiry is addressed to an officer or man concerning a missing man or the position of a grave, the enquiry should be communicated by the O. C. Unit to D. G. R. & E., London, who will reply direct to the enquirer.

In each office therefore a notice should be posted on the door or in some other suitable position requesting that all enquiries should be addressed in writing to the D. G. R. & E., War Office, Winchester House, St. James's Square, London, S. W. 1. In this

case if an explanation is desirable it is not only that the time cannot be spared for these individual verbal enquiries while thousands of graves still remain unmarked, but also that in the case of medical and other units all records are for reason of safety, etc., sent home at the first possible moment; but it may be pointed out that in the case of some other Army units these records are not immediately available at home, the Directorate has established a special enquiry branch where information is recorded in such a form as to enable enquirers to be answered with the least possible delay.

(See Circular Memorandum D. G. R. & E. 13 of 5th April, 1917.)

## V.— PLANS OF CEMETERIES

As soon as possible after the opening of a new cemetery a plan showing the lines on which it is to be laid out will be made by the inspector and forwarded to the O. C. Unit affected, whose duty it will be to see that the plan is followed and to notify any deviation from it immediately to the Inspector.

It is the duty of Officers Commanding Units to inform the Inspector as soon as it becomes likely that a cemetery in their area will require extension, or replacement by a fresh site.

It is also their duty to see that all cemeteries in their area are divided into plots and rows, and that the plots, rows and graves are visibly lettered and numbered with the least possible delay. Unless this is done it is not possible to carry out the instruction that reports are to be made by reference to these letters and numbers. (See circular memoranda D. G. R. & E. 3, dated 3rd March, 1916, and D. G. R. & E. 6, dated 19th March, 1916.)

As soon as a plot is filled up, the O. C. Unit will notify the Inspector, who will see that a record plan is made agreeing with the reports as to Plot Number, Row Letters and Graves Numbers. The Inspector will then forward to D. G. R. & E., London, the record plan of this plot, together with a small key plan of the whole cemetery showing the positions of all the plots, and he will see that this key plan is kept up to date.

### *Position of Graves*

Wherever possible, cemeteries should be so planned that the graves are dug east and west. A religious custom to which many

attach importance will thus be observed, and effect will be given to the general desire that our dead should lie facing the enemy.

## VI.— HORTICULTURE

The following instructions regarding horticulture are to be carried out by officers and Stationary Units and (so far as circumstances permit) by Officers of Mobile Units:

(1) In digging graves it is of great importance that the top soil should be preserved and replaced on the surface of the grave, unmixed with the sub-soil. It is only the original top soil that is in any way suitable for planting.

(2) It is most important that wherever graves are marked by separate mounds, these mounds should be preserved, as their existence facilitates the precise location of graves in cases where crosses are destroyed.

(3) It is also desirable that, where the alternative exists and with due regard to other considerations, burials should take place in separate graves, with mounds, rather than collectively in trenches.

### *Making up of Graves*

(4) In making up graves which have finished sinking it is of great importance that only the top soil should be used. This soil should be as far as possible clear of stones and rubbish. Special care should be taken, in cases where graves have sunken unequally, to restore the surface of the ground to a uniform level before making up the mounds.

All cemeteries where men are employed should be supplied with the regulation wooden form of grave.

In using this form the earth of the existing mound should first be removed and placed near by. The form is then placed on the exact position of the grave (including the cross at one end) and the space filled in with earth, taking care to use the top soil, and without stones or other unsuitable matter.

Graves and grave mounds should never be more than six inches in height. The sides should slope at half a right angle, and the mound should be rammed firm, especially at the base.

*Leaf Mould*

(5) Manure, dead leaves and any good soil procurable should be collected in a neat pit in some corner of the cemetery.

*Materials for Paths*

(6) Stones, bricks or other suitable materials for paths should be collected in another convenient spot.

*Grass*

(7) Grass should be cut frequently, and the edgings should be neatly trimmed to a line.

*Weeding*

(8) The most satisfactory way of exterminating weeds is by breaking up the surface of the soil lightly all over by means of a Dutch hoe or rake. This should be done continually even when no weeds are visible.

*General*

(9) It is far better to do a little gardening work often than to let it accumulate until the work is heavy.

## VII.— PHOTOGRAPHY

1. Where a photographer for any reason takes a photograph of a grave which is not in good order he shall on his exposure note explain the local conditions answerable for the state of the grave, as for example, that it was taken on a battlefield or in an advanced Divisional cemetery, or other reason, and shall submit this to the O. C. the Unit in which he is working. This exposure note should be sent, together with the other exposure notes, with the films to be developed, to the A. P. & S. Depot from time to time indicated, together with any notes or comments which the O. C. the Unit may see fit to add in explanation.

2. There shall be kept by each Unit a photography book for each cemetery or group of cemeteries in the Unit area. In these books the photographer shall enter up alphabetically under cemetery headings the lists of requests received from Headquarters, and the books must at all times be kept up to date. The photographer shall take this book with him to each cemetery he visits.

He will mark off in such book against the request entry the date and particulars (see paragraph 1).

3. All photographers, immediately they have taken a photograph of any grave, are to insert a drawing-pin on top of the cross, in order to prevent duplication of photographic work, and whenever the opportunity occurs these graves should be so marked which are known to have been photographed in the past.

4. As far as possible only one cross should appear on each photograph.

5. The photographers shall enter on each Field Exposure Note:

(a) The correspondence reference number which is given on the list of photographs to be taken received from D. G. R. & E.; and

(b) Photographers will also mark the first exposure on each spool of film autographically with the photographer's index letter and the number of the exposure. For example, the first exposure on the first roll of films would bear the number, say M I, and the first exposure on the second roll would be marked M II.

(c) The index letter and the film number must also be entered on the Field Exposure Slips against the corresponding request reference number.

6. Officers Commanding Units will see that the use of cameras is strictly confined to the taking of photographs of graves only; no general views of cemeteries or portions of cemeteries are to be taken without the authority of the D. G. R. & E.

No photographs whatever except those appearing on the lists of photographic requests received from D. G. R. & E., London, are to be taken without this authority.

7. The O. C. Unit will from time to time fix a line, east of which a photographer should not work.

## VIII.— CONTROL OF CEMETERIES

The control and the supervision of cemeteries are vested in the D. G. R. & E. by the first part of General Routine Order 1437 (see page 548).

### Permanent Memorials Prohibited

By General Routine Order 1601 of 30th May, 1916:

"No permanent memorial and, in particular, no stone crosses or monuments may be erected during the continuance of hostilities, or until further order, in any British military cemetery or burial ground in France or Belgium.

"This order applies equally to isolated graves, and to groups of graves, whether in Communal Cemeteries, or churchyards, or elsewhere."

### Exhumation Prohibited

In the Adjutant-General's D/1972/16 of 29th October, 1916, it is stated that:

"No disinterments will be permitted in the area occupied by the British Army in the Field except for purely sanitary reasons . . . and then only with special permission from General Headquarters."

### Generally

With regard to other matters (such as admission to cemeteries, the holding of commemorative or other ceremonies in them, and the photographing of graves by civilians), the Director will issue, either directly or through the Inspectors, such orders and regulations as may be required. These regulations will, where desirable, be posted up at the entrance of or within the cemeteries.

## APPENDIX

STATIONARY UNITS:
- Survey Department
- Horticultural Department
- Sanitary Department
- L. of C. Unit, O. C.
- Working Parties, O. C.

} Inspector

MOBILE UNITS:

*Southern Group**
- G. R. U. 3rd Army, O. C.
- G. R. U. 4th Army, O. C.
- G. R. U. 5th Army, O. C.

} Inspector

*Northern Group**
- G. R. U. 2nd Army, O. C.
- G. R. U. 1st Army, O. C.

} Inspector

} Director

- Land Registration and Legal Departments
- Headquarters Unit, O. C.

* These Groups are liable to modification owing to the movements of Armies.

# APPENDIX B

## THE BRICK PRESBYTERIAN CHURCH OF NEW YORK

Addresses Delivered on the Occasion of its 150th Anniversary, Thursday, January 10, 1918, by Robert Fulton Cutting and Albert R. Ledoux, Ph. D.

# THE BRICK PRESBYTERIAN CHURCH OF NEW YORK

## SESQUICENTENNIAL CELEBRATION

### Introductory Note

On Sunday, January 6, 1918, and on the following Thursday, the Brick Presbyterian church of New York celebrated its 150th anniversary.

On Sunday morning, the sermon was preached by Dr. Henry van Dyke, who was minister of the church from 1883 to 1900, and former minister from the United States to the Netherlands.

On Thursday evening, Mr. Robert Fulton Cutting, Albert R. Ledoux, Ph. D., and the Rev. William P. Merrill, D. D., pastor of the church, delivered addresses. Those of Mr. Cutting and Dr. Ledoux contain so much of historic interest that with their permission we reproduce them in the following pages.

In this connection, the reader is referred to the extended history of the First Presbyterian church, including many references to the Brick church, in the Annual Report of this Society for 1917.

## I.

## THE CHURCH AND THE CITY

By Robert Fulton Cutting

I am very glad to take part in this anniversary occasion to-night. I have lived in New York all my life and Brick Church is interwoven with my earliest memories.

One hundred and fifty years is a long time in the life of any institution in this city. The development of the community has been so rapid and its transformation so extraordinary that as compared with a century and a half ago we seem to be living in another planet.

The position of the Christian church one hundred and fifty years ago was very different from what it is to-day. It enjoyed a recognized importance that is not now accorded it. The supernatural qualities with which superstition still measurably endowed it no longer exert the influence that they did. When this church was born, the people of this city were in political childhood and the church exercised toward them a paternalistic attitude. Today they are adolescent if not mature; their apprehension is acute; they quickly recognize unreality. They have become somewhat impatient at authority, feeling their competence to co-operate in the progress of society. They cannot be treated as children or ignored. The church's attitude has ceased to be paternal and she is endeavoring to learn how to be fraternal. The commanding position in the world she once occupied, and which was chiefly exhibited in ecclesiastical monuments, has been exchanged for the modest but more far-reaching position expressed by independent agencies of civilization which she has begotten and liberated for public service. The churches, asylums, homes, relief societies and Y. M. C. A. are the modern monuments of her beneficence and altruism. While these institutions are not subject to the ecclesiastical control and are autonomous and independent, nine-tenths of those who support and conduct them are members of the Christian churches. From them they have derived their inspiration, to them they owe their generosity and public spirit.

By this policy the church is penetrating society rather than superimposing herself upon it. She is effectively illustrating the parable of the leaven hid in the meal; the Kingdom of God of the Twentieth Century cometh not with observation. The leaven fulfills its purpose while it loses its identity in the loaf.

Members of the churches are realizing as never before the importance and functions of Christian civilization. When I was a boy the extent of the historical information that I gathered about Alexander the Great was comprehended by the precocity of his military genius, the extent of his conquests and the debauchery that caused his early death. I learned later to recognize in him a noble type of conqueror. As he led his legions to overthrow the Empire of Darius he left behind him Grecian colonies through which he inoculated Persia with the autonomous principle of Greek politics. From Alexandria to Candahar, from the Ionian Sea to the Golden Chersonesus, he planted the seeds of a new civilization, and Addington Symonds sums up the magnitude of his achievement in these words: "The spiritual Republic thus established by Greek genius paved the way for Christian brotherhood. The Liberty of the children of the Muses led onward to the freedom of the sons of God." This is a luminous illustration of the purposes of civilization and it is the privilege of the Christian world to embrace its possibilities.

During the last sixty or seventy years Japan has emerged from her isolation into the comity of the nations of the Christian world by assimilating and adopting the characteristics of their civilizaton. It was America that opened the door that ushered her into modern society. China is to-day following Japan's example. She has learned two interesting lessons from American civilization. When other nations were exacting every penny they could from the prostrated empire as compensation for the damages to property occasioned by the Boxer rebellion, the United States took the $24,000,000 awarded it, distributed $13,000,000 to individuals whose property had been destroyed and returned the balance of $11,000,000 to China. Our nation was justly entitled to every penny, but this act of fraternal generosity was thoroughly appreciated by the Chinese people and they appropriated the entire

amount to the education of their youth in our American schools and universities. You will remember also with what deep feeling Li Hung Chang refers in his memoirs to the fact that nothing but the unyielding determination of the American statesman to protect China saved her from dismemberment by other powers when that calamity seemed to be inevitable.

The spirit thus embodied in American civilization has profound significance for present day society. We seem to be on the eve of a new epoch, and I cannot but believe that our country will be the protagonist in the establishment of a better relationship between nations; a relationship based upon sincerity, justice and fraternity rather than upon jealousy, hatred and deceit. We are still very far from the ideals that we cherish; but our civilization contains the promise of a glorious future. And from what source will it derive its inspiration, its energy, its benevolence, if not from the Christian churches? Who but they will supply the motive power for the demonstration of our civilization's possibilities? And how many illustrious men and women who have been cradled in this parish have gone out from it into public service! How many have been inspired by its pulpit to write their names large in the history of the philanthropic activities of this city and country! Have these children of Brick Church been disloyal to it because they have not confined their activities and their liberality to its parochial institutions? You know they have not. Brick Church has proudly given them up to promote the welfare of our people. They light their own lamps at its undying flame, and in carrying the illumination forward they have magnified its penetrating power. I have met many of them in civic and eleemosynary work and have always found them the worthy inheritors of this church's noble reputation. They are the kind of men and women the Twentieth Century demands for the more complete christianization of the coming civilization.

A group of statuary stands in the public square at Chamounix. Upon a lofty base there are two figures. Behind, erect in the attitude of contemplation, is that of the scientist de Saussure. In front, bending forward and pointing with eager gesture to the shining summit of Mt. Blanc, is the figure of the Alpine guide,

Balmat. They were the first to ascend the mountain. There they stand, the composite blend of the Christian citizen — the man of thought and the man of action both looking up. It is your function in Brick Church to-day, as in the past, to beget such children and give them to society. It is thus the church, like the individual, should best fulfill the profound dictum of its founder: "He that loseth his life shall find it."

## II.

## THE BRICK CHURCH AND THE AMERICAN NATION

By Albert R. Ledoux, Ph.D.

Before Dr. Merrill definitely decided to become our pastor, he came to New York and had a heart-to-heart talk with our church officers. Among other things, he told us that he had always admired the Brick Church for its historic and constantly loyal Americanism. Since that occasion I have sometimes wondered to what extent the compliment was deserved. It therefore seemed to me that it would be interesting to study our history from this point of view, and not inappropriate to the spirit of the present day to tell what facts stand out of our 150 years of existence which bear upon the question of Americanism, and choose as the topic of my remarks on this occasion: "The Brick Church and the American Nation."

We think we know what we mean when we speak of Americanism — but like most big things, it is not so easy to define or describe in a sentence. A friend suggests: "Americanism — the Enemy of Autocracy in Church or State — Forever Protestant Against All Imposed Allegiance." Doubtless this will seem too broad a definition to some, although the Century Dictionary quotes from an author who intimates that "Americanism" existed before our fathers emigrated to America, just as protestantism existed before the Convocation at Spires. Perhaps I may disarm your criticism by qualifying my definition by the prefix "Presbyterian": Is not Presbyterian Americanism the enemy of all autocracy and forever protestant?

Our church historian, Rev. Dr. William Henry Roberts, delivered an address on the 200th Anniversary of the founding of the General Synod — now the General Assembly — at the gathering of that body at Dallas, Texas, last May; and has also published a tract entitled, "Presbyterian Churches Versus Autocracy" (1917). He shows that four hundred years ago last year, Martin Luther began a crusade against autocracy and imperialism in the Christian church, that spread from Germany through Switzerland,

France, Great Britain, Holland and Hungary. He withstood not only the autocracy of the Pope, but defied his King as well. It was to Charles V, the German Emperor, and not to the Pope, as some have thought, that he uttered the memorable defiance: "Here stand I, I can do not otherwise, so help me God, Amen!"

John Calvin — to come closer to Presbyterian history — taught in Geneva two great political doctrines:

"First, the right of the people to limit through their representatives the authority of emperors and kings; second, the need of written political constitutions. Both representative and constitutional governments in their modern forms found their primal and chief advocate in this great Genevan. Green in his History of the English People recognizes clearly the genesis of the new life of Europe and of the Reformation, when he says of Geneva: 'As a vast and consecrated democracy it stood in contrast with the whole social and political framework of the European nations. Grave as we may count the faults of Calvinism, alien as its temper may be in many ways from the temper of the modern world, it is in Calvinism that the modern world strikes its roots, for it was Calvinism that first revealed the worth and dignity of man'
* * *

"The historian Motley says, 'To the Calvinists more than to any other class of men, the political liberties of Holland, England and America are due.'

"Our great American historian, Bancroft, says, 'He that will not honor the memory and respect the influence of Calvin, knows but little of the origin of American Independence.'

"The earliest endeavor to organize fully Calvin's ideas of representative government on the American continent, was made in Philadelphia, Pa., in March, 1706, when representatives of the Presbyterian congregations in several of the colonies came together and organized a Presbytery. This Presbytery was composed of ministers and laymen, the latter known as ruling elders. It was in every particular a representative government, and was in fact the first federal republic anywhere on the American continent. Antedating, by nearly three-quarters of a century the Continental Congress, it was a prophecy of better things to come. Further, when the Constitution of the United States of America was adopted in Philadelphia in 1788 the principles which are found in Presbyterian Church governments were put into organic form in the Constitution of the new nation."*

* Presbyterian Churches *versus* Autocracy, by William H. Roberts, D. D., LL.D.

To quote again from Dr. Roberts:

"In 1775 the General Synod issued a pastoral letter, an extract from which indicates the spirit prevailing in the Church. It reads 'Be careful to maintain the union which at present subsists through all the colonies.' In particular, as the Continental Congress, now sitting in Philadelphia, consists of delegates chosen in the most free and unbiased manner by the body of the people, let them not only be treated with respect and encouraged in their difficult service, not only let your prayers be offered up to God for his direction in their proceedings, but adhere firmly to their resolutions, and let it be seen that they are able to bring out the whole strength of this vast country to carry them into execution.'

"When the independence of the United States was acknowledged (in 1783) the General Synod addressed the Church as follows: 'We cannot help congratulating you on the general and almost universal attachment of the Presbyterian body to the cause of liberty and the rights of mankind. This has been visible in their conduct, and has been confessed by the complaints and resentment of the common enemy * * * The Synod, therefore, request you to render thanks to Almighty God * * * in particular for establishing the independence of the United States of America.'"

In a message to the last General Assembly, Hon. Thomas R. Marshall, a Presbyterian, then Vice-President of the United States, referring to the present World-War into which our country *had just then entered,* said:

"I hope it will be possible for our membership not only to be loyal to the Church but to be loyal to the Republic. Our system of Government is the system of the Presbyterian Church reduced to civil terms, and though all others fail, we ourselves should not be found wanting."

The history of the Brick Church is not easily separable from the story of Presbyterianism in this City, and hence I will give an outline of the beginnings of our denominational life upon Manhattan Island.

In 1706, Presbyterianism on Manhattan Island had its humble birth. A few persons began to assemble on the Sabbath in private houses to worship in accordance with the custom of that denomination in Scotland, whence most of them or their fathers had come

to the New World. In January, 1706, one Rev. Francis McKemie* passed through New York on his way from Virginia to Boston, and dared to preach a sermon to Presbyterians assembled in a dwelling in lower Pearl Street, and to baptize a child. The Governor of the City, the hated and arrogant Lord Cornbury, had Mr. McKemie arrested and thrown into jail for daring to preach without a license, threatening him with the rigors of the law, as *he* interpreted it, and saying, "You shall not spread pernicious doctrines here."

Mr. McKemie was kept in jail for nearly two months and at length tried by a jury, which, to the disgust of the Governor, acquitted him. He was reluctantly let go by the authorities after warning and further threats and compelled to stand all the cost of the trial. How this experience must have reminded him of the trial and reluctant discharge of Peter and John, with a threat and the command not again to be found preaching or healing in the Master's name!

After this the church had comparative peace. The Presbyterians were permitted to worship in the Dutch Reformed Church, and when a new and more enlightened Governor arrived from England, who interpreted more leniently the laws favoring the Established Church, they were not only given free exercise of their religion, but were even permitted to hold services in the City Hall!—"which seems to us a strange place," comments Dr. van Dyke, in one of his historical discourses. The people continued to hold services and to grow in numbers. In 1716, a definite organization was effected. They hired a regular room in which to worship, and were served by such ministers as they could secure from Sunday to Sunday. They had to get the consent of the Court of General Quarter Sessions to assemble even in a private house. In 1717, they called Rev. James Anderson from Delaware. In reporting to a friend in Scotland his impression of the new field, Mr. Anderson wrote:

"This place, the City of New York, where I now am, is a place of considerable moment & very populous consisting as I'm

* This name in some authorities is given as *McKennie*, but the preponderance of evidence seems to favor McKemie or MacKemie.

informed of about 3000 families or housekeepers. It's a place of as great trade & business, if not more now, as any in North America. In it are two minrs. of ye established church of England, two Dutch minrs., one French minr., a Lutheran minister, an Anabaptist & also a Quaker meeting."

Mr. Anderson then goes on to repeat his desire to have a church building for his new flock and continues in his letter:

I believe by this time yow smell my drift. I don't know how to begin to beg any more att your door least I should be reckoned (to use our own Scotch word) 'missleard.' But if any of your Substantiall Merchts or some other Synod could be prevailed upon to contribute toward the building of a Scots' church here, Oh! how acceptible it would be to religion & our interest in the place. Several of our Scots merchants trade hither & I doubt not now more will. When before now they have come, they, understanding neither Dutch nor French, were oblidged either to stay att home or goe to ye church of E.; or worse, which has been ye occasion of some mischiefs, Wickednesse and inconveniences, which I hope in great measure, if this work of God succeed here, shall hereafter be prevented."

On January 5, 1719, a lot was purchased in Wall Street; the new church was completed, and in 1720, the congregation petitioned for a charter, signing themselves the "Undersigned Scots from North Britain." The petition was denied. Into the as yet unchartered church came some who were not "Scots from North Britain," but English from Boston and elsewhere in the Newer England Colonies, and of a more liberal turn of mind than the most-straitest sect of Scotch Presbyterians. These complained of Pastor Anderson's sermons as being "too narrow and severe." The Presbytery had these discourses read to it, and found them "Orthodox and godly, but in some portions not so mild and soft as might be wished!" A schism occurred; the Scotch faction stood by the pastor; the New England and English element withdrew and found a place of worship in the house of John Barbour* "near the fort." John Barbour was a Scotchman, but evidently a liberal Scot. If not a forebear of our beloved Elder, the late William D. Barbour, certainly a spiritual ancestor. The dissenting "Dissenters" engaged the famous Rev. Jonathan Edwards, "the

* Sometimes given as Barberie.

leader of the liberal wing of the Presbyterians." He preached in this, the first "Barbour House" to appear in our history, for about eighteen months, but refused to become the pastor and counseled harmony and a reunion with the Wall Street congregation. The schism was healed, and the worshippers reunited, and those who had withdrawn returned to the First Church. Rev. Mr. Anderson withdrew in 1726.

Now this episode is not without relation to the beginnings of the Brick Church. I think it will become apparent, as we proceed, that the difference between the liberal and conservative tendencies of the people making up the First Presbyterian congregation was a cleavage not only along theological lines, but also between independence and traditional allegiance to authority in national affairs, and that when the first Brick Church was built, those who took pews there and attended its services were, on the whole, of the more liberal tendency and naturally became aggressively American sooner than those who remained to worship in the Wall Street edifice.

Dissensions continued even after the reunion. There was a mere handful of worshippers; and the liberal faction, now dominating, called another New Englander, Rev. Ebenezer Pemberton, in 1727, and peace settled upon the Church. It was chartered, and recognized in 1731 by the General Assembly of the church of Scotland.

There came to New York in 1739 the great evangelist, George Whitfield. Mr. Pemberton, the New Englander, welcomed him into our Mother Church in Wall Street when others forbade their pulpits, and a great spiritual blessing was poured out upon the Church, which added to its numbers and to its strength and influence in the community. The church building was enlarged in 1748; in 1749, a bell was installed —"the first Presbyterian bell in the City of New York." In 1750 an assistant pastor was added, Rev. Alexander Cummings. Then came the second schism, the ultra-orthodox withdrawing in 1756 and founding a church of their own where they might sing Rouse's version of the Psalms uncontaminated by the heresy that the use of Watts' Hymns was a proper religious exercise, in spite of ecclesiastical permission to

employ either or both. Then, after sundry men had been called and had refused to take the pulpit vacated by the departure of both Messrs. Pemberton and Cummings, and one Rev. Dr. Bostwick, who had accepted in 1755, had died in 1763, came Rev. Joseph Treat and Rev. John Rodgers; the latter in 1765; the former had been serving for a year or two as assistant or co-ordinate pastor with Dr. Bostwick. Dr. Rodgers was a New Englander, born in Boston, combining "the sturdiness of the Scotch-Irish, the intelligence of the New Englander, the breadth and humanity of the colony of William Penn" (Duffield); and immediately, in 1765, began the movement to erect a separate church, of which Dr. Rodgers was to become the first pastor when later the Brick Church should become not only physically but legally and ecclesiastically separate from the Mother Church in Wall Street.

On February 19, 1766, the Ministers and officers of the Wall Street Church petitioned the Mayor and Aldermen to lease to them a site on what is now Beekman Street, opposite the City Hall Park, an "angular lot" extending to Park Row and Nassau Street. They offered £40 annual ground rent. They said that "by their great and continual growth [their church building] is rendered altogether incapable of containing their congregation." The petition was granted, and the conveyance executed on February 26, 1766. The money was raised for the erection of the building largely by Rev. Dr. Rodgers, who "literallly went from door to door" in solicitation.

The church was completed the latter part of 1767 excepting the steeple. Noah Webster in describing the edifice in 1788, speaks of it as a "genteel brick building with the steeple not finished." The steeple seems to have been added in 1793. The earliest picture we have was made in 1800.

It was from the first popularly known as the "Brick" Church, to distinguish it from the stone church in Wall Street, a name which was perpetuated when the formal legal separation was secured in 1809. Many of the public references to the new sanctuary speak of it as the "Brick Meeting House," while letters of its early members frequently call it just "The Brick Meeting." It was dedicated on Friday, January 1, 1768. The sermon was

preached by Dr. Rodgers. A contemporary newspaper (the New York *Mercury*) said:

"There was a very crowded audience, and by the solemnity of the occasion and the Address of the Preacher, the whole assembly seemed to be impressed with a mixture of Seriousness, Gratitude and Joy, more easily conceived than described." Notice was given that "All that incline to take pews in the Brick Church are desired to attend there at ten o'clock next morning."

At first there was probably no particular line of division between those who elected to take pews in the New Church and those who remained in the Wall Street edifice, and the two pastors, Doctors Rodgers and Treat, alternated in service between the two churches. My recent and careful researches into the history and surviving correspondence of that day fail to find anything to controvert what our Brick Church historian, Rev. Shepherd Knapp, records, viz.:

"The two congregations on Wall Street and on Beekman Street, respectively, constituted one undivided church. The ministers belonged equally to them both, and preached alternately in the two churches on Sunday mornings * * * From the very beginning, however, there was not, so far as the records show, the slightest indication that one of the congregations was in any way inferior or subordinate to the other."

In spite of this harmony in spiritual things, there was a very human and natural diversity of affection for the two pastors — the more liberal would follow Dr. Rodgers when he was moved from one pulpit to the other; only the most regular in habit and thought remaining in their own respective pews. But again, it must be admitted that among the pewholders in the New Church were a majority surviving of those who withdrew to worship in the Barbour house in 1722, and their children. And the cautious Mr. Knapp in his history says:

"Even from the start, there was a certain observable difference between the two congregations. * * * Either by accident or, more probably, by the drawing together of congenial persons, the strong Scotch and Irish element of the Presbyterian membership remained for the most part in the older church, while the New England element was largely transferred to Beekman Street."

When the fiftieth anniversary of the pastorate of Rev. Dr. Gardiner Spring was celebrated, among the speakers was that eminent jurist — a man of cautious speech and careful statement — the late Daniel Lord, who was a member of our church early in the last century.* Said Mr. Lord:

"It is a part of the history of this church that in the Revolution it was the Democratic half of the larger Presbyterian Church which comprised it. It was the patriotic, in opposition to the conservative and Tory part of the Presbyterian body in this city. The Scotch and Irish elements were vastly conservative; the American element, the New England element, settled itself in that edifice of which we, as the successors, are worshippers." * * * "And here remained the descendants of those hard-working, hard-thinking, independent men. As I remember this community in early life, the Brick Church congregation was composed of men in the middle ranks of life — thinking, working, independent men — men whom you could not drive by fear, nor coax by favor, and with whom you could not deal without intellectual conviction."

And *who* were the men that by preference worshipped in the "Brick Meeting House"? Unfortunately, no complete list exists separate from those who continued to attend in Wall Street. Some few names only are certain.† Peter Van B. Livingston was in charge of pew renting at the one while the loyal Scot, Alexander McDougal, performed this function in the other.

Livingston was an active, anti-British leader, engaged in opposition to the Stamp Act, a member of the Committee of 100; President of the Provincial Congress for the Province of New York in 1775; First Treasurer of the State of New York in 1776; a Livingston of Livingston Manor. His record is one of consistent patriotism.

Another who espoused the continental cause was William Livingston. He boldly opposed the Tory representatives of the Established Church, who had issued a manifesto claiming that Scripture

* There is no record of when he became a member, but he was married in the Brick Church in 1818.

† It is reasonable to assume that those who owned vaults in the Brick Church plot, or who were interred therein, in the last two decades of the Eighteenth Century had been members or at least pewholders. A list of them still exists.

demanded allegiance to the King, quoting as a proof, the text, "Touch not the Lord's anointed." William Livingston replied: "That text is wrongly interpreted. The *people,* not monarchs, are the Lord's anointed." He early enlisted in the colonial defense guard, and in taking the oath of allegiance showed his recognition of its gravity by saying: "Whoever draws his sword against his prince must fling away the scabbard," adding: "We have passed the Rubicon; we cannot recede, nor should I wish to if I could." He became "Commander in Chief in the State of New Jersey; Chancellor and Ordinary of the same." His zeal and courage even in adversity brought to him from the Tory press the mock titles of "Don Quixote of the Jersies," "Knight of the Order of Starvation," etc.

Another was John Morin Scott, one of the "Sons of Liberty," Brigadier General of New York Militia, a member of the Provincial Congress, Secretary of the State of New York, member of Congress in 1780.

Joseph Hallett was a member of the committee to detect conspiracies in 1776, and member of the first Congress. John Lasher was Colonel of Militia in 1775–1783, and also a member of the Committee of One Hundred. He had signed a loyalist petition to the king, but lined up on the American side when this bore no fruit.

Isaac Sears was a leader in resistance to the Stamp Act, and in the daily struggle to maintain the "Liberty Pole," erected on the green opposite the Brick Church. Armed with a ram's horn, he routed a squad of British soldiers who were posting placards derogatory to the Sons of Liberty, and marched some of them, with their provocative broadsides, up to the Mayor's office, where he arraigned them for provoking a riot!

Now let it be made plain that I am not claiming nor attempting to prove that *all* the patriotism was found among the New England, or American-English, element which predominated in the Brick Church. "Scots of North Britain" have shed their blood on many a heather-purpled hill for liberty of worship. A maternal ancestor of my own was shot on his doorstep near Ayr by British soldiers for having hidden his Bible and refusing to

give it up on demand. Even the McDougal of the Wall Street Church became a "Son of Liberty"; Colonel of a regiment; a General. He issued a patriotic address "To the Betrayed Inhabitants of New York City and Colony" and was imprisoned. In what seems to be his own careful handwriting is preserved a list of 106 men to whom he had given out as members of the Militia in 1775, "a good firelock, bayonet and cartouch belt," and of these privates at least eleven were probably pewholders in the Brick Church, who later with their Colonel and their firelocks joined the Continental Army.

Time will not permit me even to mention the names of many of our Brick Church fathers who carried into the war their allegiance to democracy — men like the Rev. James Caldwell, of New Jersey, ancestor of one of our present members, Mr. Caldwell R. Blakeman, who, when the enemy unexpectedly appeared, brought from his church the hymn books, other gun wadding being unavailable, and said to the men of his parish, "Here, give 'em Watts!"

This Rev. Mr. Caldwell, soon to become known as the "fighting parson," was sent by Presbytery as a special commissioner to aid the envoys from the First Church to persuade Dr. Rodgers to accept the call to New York and the Synod of Delaware to release him. He was evidently a man of similar convictions to Dr. Rodgers' and doubtless aided not a little in the accomplishment of the result.

You may by this time be wondering when I am going to say something about our first pastor, Rev. Dr. John Rodgers. I have been appalled by the mass of pertinent facts available, from which I must, perforce, select but a few. Among the eulogies, appreciations and sketches of his life, found in publications, resolutions and letters, none better sums up his character and services than the tablet in our church:

"Sacred to the Memory of the
Rev. John Rodgers, D. D.
the founder of the Brick Presbyterian Church and its beloved and honored pastor for forty-five years.
Born in Boston, 1727
ordained to the work of the ministry March 16, 1749. He was eminently successful in his work; a noble example of fidelity and affectionate earn-

estness, filling the various spheres of public and social life with singular urbanity, promptness and discretion. He died at the advanced age of 83 years; a bright illustration of the truth that the memory of the just is blessed."

A pastor, especially one who is privileged to serve in one pulpit through many years, moulds his congregation into a body of like thought and attitude and aims. Those who differ with him withdraw; others come in. Therefore, we are not surprised to find that the Brick Church was a unit behind their pastor in the decisions and performances of the days of '76.

He was a commanding figure in City, Colonies and Church. In 1776 he became Chaplain in General Heath's brigade; was Chaplain of the New York State convention; of the "Council of Safety" and of the first State Legislature.

Knapp's History records a visit to the South which Dr. Rodgers made in 1776 "on private business"; but as a matter of fact, he went at the request of the Congress to recruit the "Regulators" who hesitated to support the New Government, since they had taken the oath of allegiance to Great Britain. These "Regulators" were largely well-to-do North Carolina Presbyterians, who had previously banded themselves together to secure justice. Dr. Rodgers proved the right man for the task, and won them over to all allegiance to the Continental cause.* Incidentally, I will add that on this visit he was asked and consented to try to raise money "in the Carolinas" for Princeton College.

Hon. Gouverneur Morris, at the time of the death of Dr. Rodgers, said:

"Believing the opposition of America to be right, he adhered to her cause, and was a good Whig because he was a good Christian. He showed the liberality of a gentleman, not soured by that intolerant spirit which assails and sometimes subdues (the spirit of) clerical men of talents and worth: He had not only the faith and hope but also the charity of a Christian."

His sermons are full of thoughts that might well be repeated to-day:

* Jones, Thomas, History of New York during the Revolution, Volume I, page 8.

"The British people [*under a German King*] were deceived by their rulers and led into a favorable attitude toward, and compliance with his measures for domination."

Undoubtedly referring to the Hessians, borrowed from Germany to fight against the Americans, Dr. Rodgers said:

"It is much to be lamented that the troops of a nation that has been considered as one of the bulwarks of the Reformation should act as if they had waged war with the God whom Christians adore. They have in the course of this war utterly destroyed more than fifty places of public worship in these States."

Moreover, George III and his followers

"had laid their plans in advance with such art as to deceive the nation into favorable sentiments to their measures and thus to lead them to aid in the accomplishment of their purposes."

Before leaving the sketch of Dr. Rodgers, it must not be omitted that he was also liberal and catholic in matters ecclesiastical. He said in a famous sermon:

"Benevolence in an especial manner should manifest itself with respect to those religious distinctions that unavoidably are found in the disciples of our Common Lord. It is not to be expected that we should all be united in *opinions* * * * but we may all be united in affection, and this is what I devoutly recommend — that when we cannot agree, we should agree to differ."

Upon one occasion, when requested by his church officials to preach against the errors of a particular sect, and to warn his people against them, Dr. Rodgers replied:

"Brethren, you must excuse me. I cannot reconcile it to my sense either of policy or duty to oppose these people from the pulpit otherwise than by preaching the truth plainly — faithfully. I believe them to be in error, but let us *out-preach* them, *out-pray* them and *out-live* them and we need not fear."*

Enough, or at any rate all that time will permit, has been said to demonstrate that the Brick Church, following its great leader, stood for democracy and liberty in the early days of our Nation, allied with the majority of Presbyterian Americans, of whom George Bancroft said: "The Revolution was a Presbyterian measure, the natural outgrowth of the principles which the Presbyterians of the Old World planted in her sons."

* Knapp's History, page 100.

Rev. Joseph Treat, associate minister to Dr. Rodgers as he had been to his predecessor, was also a chaplain in the War, serving in Malcolm's New York regiment. He did not return to New York at the close of the War, and, says Mr. Knapp in his History of the Brick Church, "there were reasons why the Session did not desire that he should do so." From that time until 1809, Dr. Rodgers was sole "Senior Pastor." He had for associates two or three ministers, successively, and in 1793 Rev. Samuel Miller, a man of mark, distinguished in bearing, "having much more than common advantages in respect to personal appearance * * * which would not pass unnoticed in a crowd." We are not surprised to learn that he was the author of a book on "Clerical Manners"—"a Chesterfield in deportment, with an uncommonly polished style in writing." He was an historian, one of the incorporators of the "Free Schools" established in his day, and quite naturally a "foster father" of Princton Theological Seminary, when it was founded. He was a strong objector to slavery, and made a public address in 1797, denouncing the buying and selling of men in the country where "all men are declared to be free and equal."

The fascination of the pages of our early history has caused me to linger too long in the period of the Revolutionary days, and I must hasten on. I will not even pause to name the men who constituted our first Board of Elders, Deacons and Trustees.

There were separate Clerks of Session for the two churches at least as early as 1796, and under date of December 30, 1799, it is recorded that seven men were elected *Elders of the Brick Church,* and certain others Elders in the Wall Street church, thus suggesting an actual difference in control, ten years at least before the legal separation. These Brick Church Elders were:: Benjamin Egbert, John Bingham, John Mills, Thomas Ogilvie, William Frazier, William Williams and Richard Cunningham.*

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I cannot linger to speak of the stand of our Church in the War of 1812, but I *must* quote from a letter written by a good Presby-

* None of these names appears in the list of Elders of the *First* Church, as printed in the Proceedings of its Two Hundredth Anniversary.

terian lady describing conditions in Church and City on October 25, 1813:*

"My dear Sister:

"The times are very hard. Money almost an impossibility. The necessaries of life are very high. Brown sugar $25.00 per cwt., Hyson tea, 17 shillings per lb. * * * We are obliged to use beans steeped in hot molasses. Many are living upon black butter-pears, apples and quinces stewed together.

"The Brick Meeting has been newly painted, with the addition of a mahogany pulpit and balustrade. They have placed in the church two of those new-fashioned Russian stoves. The first Sunday they were used the church was so full of steam they were obliged to open the windows * * *

"Last week the Presbyterian Synod met in our city * * * Rev. Archibald Alexander now of Princeton, N. J., preached in behalf of the new and wonderful (?) school for young Divines, which they have started in the Jerseys * * * He is a very learned man and is Colleague Professor in this aforesaid Jersey town with our former, dearly beloved Pastor, Rev. Dr. Samuel Miller. Oh, my dear sister, you have no idea how sorrowful the parting was between our church and Dr. Miller; he is such a loss! * * * To leave this delightful city, with its cultivated society and all its privileges for a red-mud Jersey village! Could we only believe that it was of the Lord we would be willing to give up our minister. But it is *not;* some of the rich men of Gotham have got hold of a wild-goose scheme of establishing a school to teach young men how to preach, how to become clergymen. Why cannot they go on in the old manner? * * *

"Mr. McLeod will preach once a day [in Cedar street]. He is the son of the pastor of the Scotch Church in the City and is said to be a very brilliant young man. But Dr. McLeod, the father, has two objections to the arrangement; both of them sound rather strangely. One is the salary; they offer him $800 for the season. He thinks it too much, *or rather his father does;* looks too worldly minded for a clergyman to receive so much money. But the greatest trouble is the Psalmody. True to his principles as a minister of the Scotch Presbyterians, our young clergyman can only give out the versifications of David's Psalms. Watts' hymns are against his conscience. This matter was arranged as follows. Mr. Divie Bethune and Mr. John E. Caldwell were to stand in

* I am indebted to Rev. Robert Barbour for this interesting document.

front of the pulpit and read two Watts' hymns for the congregation to sing * * * Now another difficulty arises. He could not officiate at the sacramental table of any church that does so wicked thing as to use Watts' hymns; he cannot even partake of the sacrament at those ungodly and profane altars. This was a poser. Here Dr. John M. Mason [Associate Dutch Reformed] came to the rescue; on sacramental occasions he will exchange with Mr. McLeod, dispense the sacrament, and sing the Psalms of David." * * *

After a description of the illuminations in honor of Perry's victories, the writer continues:

"At these times this is great nonsense. It is high time that this cruel war was at an end * * * Many have been made widows and orphans through the cruel realities of this war. Provisions dear, the necessaries of life so high that the poverty in the city is great; so I think that the money had better be distributed among them than wasted on tallow, sperm, and candlesticks. Then to think these illuminations, beautiful as they were, were held on *Saturday evening* — holy time, to be spent in preparation for the holy Sabbath Day — what a desecration of the Lord's Day!"

The records of the Church are filled with quaint pictures of the lives and times of a far-off day. There was an inquisition as to what had become of "a pair of speckled stockings of a bluish cast," of a "Blue cloth cloke," afterwards identified as making up someone's "surtout and trousers"; as to whether the Session should censure a member (a woman) because she "loved her small beer dashed with a little rum every day, to refresh nature." The deacons too have surprising things in their records, *e. g.*, their investment in lottery tickets in the hope thereby to increase the funds of the Church!

Rev. Gardiner Spring became our Pastor in 1810. For sixty-three years this giant among men of note and influence survived to direct the destinies and determine the standards of the Brick Church. In his later years he had as colleagues the Southern orator, William J. Hoge, the scholarly William G. T. Shedd, and the cultured and gracious James O. Murray.

Dr. Spring, even in extreme old age, kept a hand on the reins, and is said to have consented to the appointment of an associate

pastor in the words: "Well, all right, but though two can occupy the front seat in a buggy, only one can drive; *I* propose to hold the lines!"

There are volumes printed about this great apostolic man — his talent; his piety; his wide influence. I can only dwell, and that all too briefly, upon one or two characteristics of his many-sided life.

As a pastor he was remarkable; an orator, executive with a grasp upon all details. He led; our people followed. His stand on any question was his Church's stand, so that to state his position in relation to any cause is to state that of our Church as well. He was an indefatigable worker and once quoted with approbation General Spinola's comment on Sir Francis de Vere's epitaph which says that this General had "died of having nothing left to do." "That's enough to kill any General," said Spinola.

The tablet erected to his memory says:

GARDINER SPRING, D.D., LL.D.
Born at Newburyport, Mass., February 28, 1785.
Installed pastor of this church, August 10, 1810.
Eminent for his eloquence, fidelity and thoroughness.

As a preacher he gave himself with singular devotion to the service of this church in a ministry of over sixty years; wise in counsel, catholic in sympathy, his influence was felt throughout the whole church; venerated for his long life of untiring industry and abundant labors in varied spheres of Christian effort, he died in undoubted faith, August 18, 1873.

His people, at one time presented a testimonial to him, in appreciation of his services, which reads in part:

"In all *seasons of calamity,* during plague and pestilence, personal peril and public danger, you have always been at your post, and, with unflinching fidelity and devotion, ministered to the wants of the sick and dying, and comforted the sorrowful and bereaved.

"And we also bear witness to your usefulness as a public-spirited Christian man, in the councils of the church at large."

His father had been a successful pastor in Massachusetts; a man of gentle nature and deep convictions. A contemporary said of him, "I love to hear Mr. Spring pray, because he prays as though he loved God."

Under Dr. Spring's pastorate, improvements were made in the Brick Church. For the first time (in 1810) stoves were permitted in the sanctuary — not without protest from some.

As preacher and theologian, he satisfied his people, but certain others of his denomination deplored his New England liberality, and Presbytery received him with same misgivings. "His Sunday sermons supplied his orthodox critics with abundance of material for the coming week." (Knapp.) They were openly or covertly attacked in pulpit and in print. To-day they seem very conservative as to theology but very liberal as to practice.

"As to my creed," he wrote: "I do not ask that in every particular my brethren shall subscribe to it. I only ask that they sincerely adopt the Confession of Faith of the Presbyterian Church as containing the system of doctrine contained in the Holy Scriptures.

"Few in this age of inquiry believe every word of it, nor did their fathers! * * * the iron bed of Procrustes is not suited to the spirit of the age. (Knapp, p. 160.)

Yet he was not lax in his convictions, though charitable in their application to others. He disapproved of dancing for instance, yet admitted that "Youth is a very real force in the world, and it is a forgone conclusion that our young people *will dance.*" "He was the leader of the twelve men," says Dr. van Dyke, "who, members of the Presbytery of New York, protested against trials for heresy, * * * and in this course his Elders sustained him heartily and vigorously."

The same might be said of Dr. van Dyke and of our Session during the notorious trial of the late Dr. Briggs.

In a sermon in 1858 Dr. Spring said:

"Why this parti-colored blazonry, and this cross-firing of the hosts marshalled under the Captain of our Salvation? * * * The Book of God has its standard for church fellowship, and here it is * * * 'Grace be with them that love our Lord Jesus Christ with sincerity.'* We have long since learned that conformity is not essential to unity, nor to Christian fellowship."

At intervals from 1836 on, the city tried to get back the "Vineyard lot" and at least once the Brick Church rejected

* An Historic Church, p. 21.

offers; but business and the widening of streets crowded them, and by 1850 a majority of their best supporters and workers had moved up town, and the Church was ready to follow. In 1856 an arrangement with the City was concluded and $200,000 was agreed upon for a surrender of the perpetual lease of the Brick Church site. That this was not an exorbitant price appears from the fact that the city resold the same lots at auction, within a few months, for $270,000. On May 25, 1856, the Brick Church congregation met for the last time in the old church.

It should be noted that Dr. Spring did not wish to leave that down town neighborhood churchless. He proposed that Presbytery should buy the land and building in Beekman Street and maintain it for "strangers and people in hotels and boarding houses," and offered on behalf of his people $50,000 toward the cost, and to join in soliciting funds to complete the sum needed; but Presbytery vetoed it.

The lot we now occupy on Fifth Avenue at 37th Street was bought for $58,000, and the new Brick Church erected. The dedication took place on October 31, 1858. Says a contemporary newspaper: "An immense crowd attended, filling aisles and portals. Ex-President Fillmore and lady were present, and the ceremonies were conducted by the venerable Dr. Spring. The avenue was completely blocked with carriages."

If these words of mine are preserved and some reader — say, in A. D. 2018 — shall wonder what were the traffic conditions in 1918 it will interest him to know that an official count made by the police on a certain day in 1917 showed that 140,360 pedestrians and 14,360 vehicles passed 34th Street and Fifth Avenue in ten hours, and over 18,000 vehicles passed the corner of 42d Street in ten hours.* This church stands between these two points. While the average per hour may not startle us, the *maximum* flow of this great army at the noon hour certainly is a sight to behold!

We saw that the first Brick Church was erected just prior to the Revolution. Its successor was built on the eve of the Civil War. The burning question of slavery had become one which would

* Valentine's Manual, 1917–18, p. 35.

not down. The Presbyterian Church which was so nearly a unit in the first great war was sharply divided largely along geographical lines in the fifties; but there was a strong faction north of Mason's and Dixon's line that was distinctly and agressively pacifist and not willing to go to war even to preserve the Union. Dr. Spring and the Brick Church were on the right side, as we now know. The Presbytery of New York memorialized the General Assembly in May, 1857, "to show effectively to all the world their utter disapprobation of the whole subject of American Slavery."

When war began, Dr. Spring preached and worked to secure a firm and united stand behind Abraham Lincoln (a Presbyterian President, by the way) of our entire northern denomination. By a great effort, with display of rare tact as well as persistent courage, he finally succeeded in placing upon the records of our General Assembly, the so-called "Spring Resolutions" (May, 1861) which among other things declared:

"That in the judgment of this Assembly, it is the duty of ministers and churches under its care to do all in their power to promote and perpetuate the integrity of these United States, and to strengthen, uphold, and encourage the Federal Government."

The resolutions pledged the Presbyterian Church "to promote and perpetuate the integrity of the United States and to uphold the Government."

And the members of this Church loyally followed their Pastor. There were many who volunteered or went with their regiments of State Militia and achieved honors on the battlefield. There were many others of our members who rendered equal service at home — such as Paul Spofford, a trustee, the great shipping merchant who placed his ships and their captains at the disposal of the Government, and refused to place any of them under the protection of a neutral flag, thereby to obtain great financial profit.

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Dr. Spring passed away in 1873. The Church he left behind him had learned under his guidance, among other things, the duty of generous giving, and the importance of Neighborhood Work, establishing a Sunday School and Mission at Broadway and

32d Street in 1859. In 1867, our first Mission building was erected in West 35th Street and into it moved the scholars and teachers from the Broadway enterprise. Our elder, the late John E. Parsons, was Superintendent of that Mission for twenty years, and the late William D. Barbour was the tender shepherd of the lambs of that flock for half a century.

Our present "Neighborhood Work" is a logical outgrowth from Dr. Spring's teaching and example. His sermons are full of such inspiration, for example:

"We reverence the sanctuary for its social and fraternal character. It is a house of prayer *for all people* — a symbol of man's brotherhood * * * of all places in the world where rich and poor, bond and free, wise and unwise * * * are regarded with Christian impartiality."

It was well said of him, by a man of another denomination, that he was "not only a minister *in* New York, but a minister *of* New York."

But I must sometime leave the fascinating story of Dr. Spring's pastorate, and somehow reach an end for this address. What shall I omit of the story of this Church under Rev. Doctors Murray, Bevan, van Dyke, Babcock and Richards! Their leadership made the name of the Brick Church famous beyond the bounds of this country. Under Dr. van Dyke we united with and knit into our body-ecclesiastical the corporation, and souls of the splendid membership of the old Church of the Covenant. The two Missions became "Affiliated Churches"— a happy and a new solution of an old problem, and we remodeled and beautified the interior of our Church, and rebuilt the organ.

Dr. van Dyke as Chairman of a special committee of the General Assembly, upon which our Mr. John E. Parsons served, prepared the "Book of Common Worship" approved by the Assembly and he had much to do with the adoption of the "Shorter Statement" of our doctrinal standards. His services to church and learning, to literature and above all, to our country, cannot even be enumerated to-night: The time to set forth and to estimate their great value has not yet arrived. He is moving ahead too fast for us to keep up with him! *This week* it is

announced that he has been appointed a Chaplain in the Naval Reserve, with the rank of Lieutenant Commander, and assigned to lecture duty on board training and battleships throughout the world.

What that would be adequate could I say in a few sentences of Dr. Maltbie D. Babcock? Our Greatheart for one Golden Year!

In the late Dr. Richards' pastorate — from 1902 to 1909 — cut short by his untimely death, we had a worthy successor in our line of ministers, a man not only a great preacher and pastor "but a good citizen, interested in all questions of a public nature." Like Dr. Spring, he was of New England birth and education; like all of our pastors, he was sought continually as a preacher at schools and colleges; an athlete who held his own in competitions, thereby still further securing influence over young men. The Church continued to be noted for the large number of young men in the congregation. Under his leadership were planned and completed our splendid "Memorial Buildings" in West 36th Street.

I need not dwell at length upon the stand of our branch of the Presbyterian Church in the present "World War"; it is known of all men. The General Assembly met at Dallas, Texas, early in May last, and adopted a minute which I will quote in part only:

"Deliverance on the State of the Nation

"*To the Ministers, Officers and Members of the Presbyterian Church in the U. S. A.:*

"Brethren Beloved:

"In the development and progression of the ideals and institutions of the American Republic, Presbyterianism has been a vital and significant force. That force is challenged anew by the crisis that now confronts this generation. The conflict into which we have been irresistibly drawn is one that is so manifestly for the maintenance of righteousness and in behalf of humanity, that it should command the courageous and unreserved support of all our people. By every memory of the sacrifice and suffering of our fathers, by every thrill of loyalty to our sacred heritage, by every compelling motive that inspires unselfish action, the Presbyterian Church is summoned to do its part in redeeming the world from its bondage of autocratic rule, and from its prison

house of armaments, and into a life free to express its own natural good will and fellowship with all men." * * *

"We are profoundly touched by the patriotic devotion of the young men of our Church and of the country, whose clear and sober discernment of the issue involved, and whose readiness for the full measure of sacrifice for humanity and for the ideals of their nation have strengthened our faith in the future, and have renewed our appreciation of the schools, colleges and universities wherein they have been trained." * * *

"That effect shall be given to these convictions, it is

"Resolved, That a National Service Commission of the Presbyterian Church in the United States of America be appointed by the Moderator; that this Commission * * * be instructed to make to the Government of the United States formal offer of the services of the Presbyterian Church, and, upon any request that may be made by the Government, the Commission be authorized to call upon any or all of the agencies or resources of the Church, as in its judgment may be wise or needful."

The first publication of that Commission, of which, by the way, Dr. Merrill is a member, says:

"On Good Friday, April 6, 1917, the American Nation took up the cross. With a calm confidence in the justice of its cause, it began to marshal its resources for the impending conflict between freedom and tyranny * * *

"The Presbyterian Church, true to its noble traditions and inspired by the memories of those who secured the very liberties which the nation is now defending, took up its share of this world cross. With a singular freedom from hatred and bitterness, the Presbyterian Church of the United States of America has placed itself on record in terms of the most intense loyalty both to Christ and to the nation."

The quotations I have given in what has gone before, fragmentary of necessity and incomplete, lest I trespass unduly upon your patience, are surely sufficient to establish the thesis that our denomination, which has always been loyal to the Government by a large majority, to-day stands unitedly behind our Presbyterian President in the prosecution of a righteous war, that a lasting and righteous peace may be achieved.

The stand taken by the present ministers and people of our Church and our response to the call of the President and the

mandate of the General Assembly are more fully told in the Brick Church Year Book which is just off the press. To our assistant Minister, Rev. Mr. Janeway, we granted indefinite leave of absence at Plattsburg, where he has been engaged in Y. M. C. A. work. Our Elder, Mr. William Sloane Coffin, is at the head of the French Y. M. C. A. work among their camps. Maj. Herbert Parsons, a Trustee, is working in the war department. Capt. Gerard Beekman Hoppin, a Deacon, is also in the U. S. Army. A growing "Honor Roll" of our men in uniform is placed in our vestibule; above our entrance hangs a "service flag," with three dozen stars, already too few in number to represent the total of our men who have gone to serve. There are many families in the Church which have given some loved one in response to their country's call. We men who are too old to volunteer are largely employed on various advisory boards or committees. The women are putting in many hours a week in organized war relief, Red Cross or similar service. And yet our regular routine of work and ministry to the families, and especially to the children of our wide "Neighborhood" continues to grow in extent and efficiency. This is largely due to the fact that God has given us, in our line of distinguished pastors, another great leader. Dr. Merrill would be the first to disclaim the credit we feel to be his due. But would all the following achievements have been ours *without* his inspiration? When he came to us six years ago there were not, as now, a Neighborhood House, a Neighborhood Secretary, a Neighborhood Lunch Club, a Barbour House, nor a daily noon-time service in our Church. Without his inspiration, would we have so firmly refused the offer of over $2,000,000 for our church site? — a temptation to move, forever put behind us I trust.

Dr. Merrill has been throughout the past critical period a consistent follower of President Wilson. He approved of the President's firm stand in his effort to compel the German autocracy to forego or to civilize its submarine campaign, and when the rulers of Germany piled atrocity upon atrocity, defiantly flouted all laws of nations, and redoubled their infamous and insidious plottings even at our own firesides, Dr. Merrill placed

himself squarely in line behind the great leader of our country in urging unqualified loyalty to our Government, and to the righteous cause to which we are unalterably pledged.

Here by this pulpit is our national flag. To it and to all for which it stands we pledge anew the loyalty of this old yet vigorous Brick Church; forever opposed to all autocracy; now as always truly American.

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# APPENDIX C

## OPENING OF THE SCHUYLER MANSION AT ALBANY, N. Y.

October 17, 1917

## OPENING OF THE SCHUYLER MANSION

### Formal Exercises October 17, 1917

On Wednesday, October 17, 1917, the 140th anniversary of the surrender of Burgoyne at Saratoga, the house in Albany, N. Y., which was the home of General Philip Schuyler at that time and in which he continued to live until his death, was formally dedicated as a public monument.

The American Scenic and Historic Preservation Society was officially represented at the exercises by its President, Dr. George F. Kunz, and Dr. Charles M. Dow.*

The home of General Schuyler was built in 1762, and occupied by him until his death in 1804, when the house passed out of the possession of the family. It was purchased by the State of New York in 1911, to be preserved for the public as a memorial to General Schuyler and as an historic monument. The house is in charge of a board of ten Trustees, originally appointed by Governor Dix in 1911.

The present Trustees are Mrs. Daniel Manning, President; Hon. James F. Tracey, Vice-President; Mr. Edgar C. Leonard, Secretary; Mr. Albert Hessberg, Treasurer; Mr. Ledyard Cogswell, Mr. James Fenimore Cooper, Mr. Parker Corning, Hon. John A. Delehanty, Miss Georgina Schuyler, and Mrs. William Bayard Van Rensselaer.

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* When the plan for the preservation of the Schuyler mansion was proposed in 1911, the late Mr. J. P. Morgan, Honorary President of the American Scenic and Historic Preservation Society, heartily sympathized with the idea and gave Miss Georgina Schuyler a note of introduction to Dr. Kunz, the President, suggesting the active co-operation of this Society in the movement. The Society cordially endorsed the plan and in addition to the formal action of the Society, the President personally spoke to Gov. Dix and others in favor of the plan. The Society has therefore taken special interest in the progress of the work of the commission in charge of this very interesting landmark.

The following information about General Schuyler and the mansion is taken substantially from the program of October 17, 1917:

General Schuyler, who was born in 1733 and died in 1804, was a Captain in the Colonial wars from 1755 to 1758; a member of the Provincial Assembly of New York from 1768 to 1774; a delegate to the Continental Congress in 1775; a Major General in the American army under Washington commanding the Northern department from 1775 to 1777; a member of the Continental Congress from 1779 to 1781; New York State Senator (almost continuously) from 1780 to 1790; and one of the first two United States Senators from New York serving the short term from 1789 to 1791. He was re-elected Senator but resigned owing to ill health. He was also a Commissioner for the settlement of the Massachusetts and Pennsylvania boundaries; Surveyor General of the State of New York; Chairman of the Board of Indian Commissioners; President of two canal companies incorporated in 1792, and a member of the New York State Society for Promoting the Arts.

During General Schuyler's lifetime the house stood in the country, with ample grounds about it, and was called "The Pastures." The street system of the city of Albany has gradually extended beyond the house, however, and now it stands on the southwest corner of Clinton and Catherine streets, fronting on Clinton street,— that is, facing eastward,— at the head of Schuyler street. It is about three-quarters of a mile in an air line from City Hall. The kitchens and quarters for negro slaves, long since removed, were low buildings in the rear.

The house is replete with historic memories. Here Alexander Hamilton was married to Elizabeth Schuyler, and here he resided for months at a time, engaged upon some of his most important papers. The rooms have seen, looking from their windows or seated by their firesides, Washington, Franklin, Lafayette, John Jay, the French officers under the Rochambeau and many another distinguished guest. Here, as a crowning act of Schuyler's magnanimity and generosity, Burgoyne and his officers were received as guests for two weeks after the surrender at Saratoga, where

the exigencies of war had caused the destruction of Schuyler's house and property by order of Burgoyne. The large upper hall was doubtless the scene of the reception given to Washington after the Peace of 1783. The staircase still shows on its railing, the mark of the tomahawk thrown at Margaret Schuyler, as she ran upstairs with her little sister in her arms, during a raid upon the house by Tories and Indians in 1781,— an unsuccessful attempt to capture Schuyler and take him prisoner to Canada. And the General's study bears mute witness of the days and nights spent in anxious patriotic toil by the man who, on that memorable night of April, 1775, when the news came of the battle of Lexington, wrote to a friend: "I care not what others may do, as for me and my house, we will serve our country."

The Schuyler Mansion has been restored by the Trustees under the direction of Mr. Lewis F. Pilcher, State Architect, and Mr. Charles A. Sussdorff, Deputy State Architect. It is not yet furnished. Twenty pieces of inherited 18th Century furniture have been given by descendants of General Schuyler (several of these having come originally from the house,) and a few gifts and loans have been received from members of old families and patriotic societies of Albany. The State has made no appropriation for furniture. It is the hope of the Trustees that, eventually, the house may be completely furnished by gifts, loans and bequests from those who may be interested in the preservation of this historic building. Such gifts are restricted to 18th Century pieces (not later than 1804), either originals or copies, as the law requires the house to be preserved "as nearly as may be in the original style."

### Program of Exercises

The program at the opening exercises on October 17, 1917, was as follows:

Prayer of Dedication: Rev. William Herman Hopkins, D. D., Chaplain of Philip Livingston Chapter, Sons of the Revolution

Report on the Work of Restoration for the Board of Trustees: Mrs. Daniel Manning, President of the Board

Address: Hon. Charles S. Whitman, Governor of the State of New York

Address: Dr. John H. Finley, State Commissioner of Education
National Anthem: The audience.

At the conclusion of the exercises, the guests were received in the mansion; and from 9 to 11 o'clock in the evening, Mrs. Manning gave a reception at her residence, No. 153 Washington avenue, to meet Governor and Mrs. Whitman and the Trustees of the mansion.

### Mrs. Daniel Manning's Address

Mrs. Daniel Manning's address at the Schuyler Mansion was as follows:

Your Excellency Governor Whitman, Doctor Finley, Ladies and Gentlemen:

We are gathered here to-day to honor the memory and services, as well as the sacrifices, of a hero and patriot, General Philip Schuyler. At no time in the history of this country does General Schuyler stand out more boldly as one of the leaders and framers of our republic than today. From the days when Philip Schuyler led his company of Provincials in the first fight of the French and Indian War until he sat in the Senate of the United States as the representative of the State of New York, there elapsed about forty years. The surroundings of his boyhood were such as to develop the practical and hearty qualities necessary for success, at a time when there was no specialization of activity, when a leader of men had to be an adept not only in one but in various vocations. When Burgoyne had to be faced, and when the inhabitants of Western New York kept applying to Schuyler for protection he said, "For God's sake, do not forget that you are an over-match for any force the enemy can bring against you if you will act with spirit. I have a large army to oppose, and trust I can do it effectually, and prevent their penetrating to any distance in the country. Keep up your spirit; show no sign of fear; act with vigor, and you will not only save your country but gain immortal honor."

John Trumbull, in his painting of the surrender of Burgoyne for the Rotunda of the Capitol at Washington, represents Schuyler as standing in citizens dress among his countrymen in Continental uniform. To continue his military services and finally to receive the sword of his enemy, were privileges which unfortunately circumstances had taken from him. But Trumbull portrayed truly the judgment of his time and of posterity in placing

Schuyler the *patriot* in the foremost of that great scene which his faithful and unselfish labors had done so much to make possible.

This house, built in 1762 for Philip Schuyler of Albany, then Captain in the Colonel Army, subsequently Major General in the Revolutionary War, has long been considered one of the most important eighteenth century houses in our State. At General Schuyler's death in 1804, it passed out of his family, and after a succession of private ownerships,— that of Judge Tracey's family among them,— it became a Roman Catholic Orphanage in 1863.

The building has kept its hold upon the interest of the community, has been widely known, and often visited by strangers to whom it has been generously shown by its different owners. The Sisters in charge of the Orphanage took a special interest in the historic traditions and were most kind to visitors. Of late years efforts were made from time to time, by the Sons of the Revolution, and by individuals, to purchase and preserve the house as an historic monument, but not until the winter of 1910–1911 was it ascertained that the owners were willing to sell it and for a patriotic purpose only, either to the State or to a patriotic society, as stated in a letter by the late Bishop Burke, " in order to preserve the historic integrity of the building."

The matter was taken up vigorously. It was found Governor Dix and the Legislature were in sympathy with the project, as well as prominent citizens of Albany and New York City. A statement signed by the patriotic societies was widely circulated with an illustrated pamphlet giving an account of the house and General Schuyler's career. The press gave extensive notices, all commending the purchase of the house by the State.

On February 26, 1911, a bill was introduced into the Senate by Senator Ralph W. Thomas " to provide for the acquisition and preservation of the historic building known as the Schuyler Mansion situated in the City of Albany and making an appropriation therefor."

Subsequent bills amending the above, were introduced by Mr. Alfred E. Smith, Chairman of the Committee on Ways and Means of the Assembly, and Senator James Frawley, Chairman on Finance of the Senate. These provide for a board of ten trustees, of whom at least three must be women, appointed by the Governor for terms of five years to serve without compensation; to have the management and custody of the house and grounds, " and preserve the same as nearly as may be in their original style "; to appoint a custodian for the same who shall reside on the premises; also to collect and acquire for the State and preserve within and upon the premises furniture, relics, mementoes and

records as it deems appropriate; to make and enforce suitable rules and regulations, not inconsistent with laws relating to the admission of the public to view the house and its contents; visitors to be admitted to the house and grounds without charge during reasonable hours. No keeper, trustee or officer of the Board shall have any interest, directly or indirectly, in any contract for material or labor furnished.

Forty thousand dollars were appropriated for the purchase of the house and grounds. Five thousand were appropriated at the outset towards their restoration.

Three distinct funds were provided for in the Act of the Legislature creating the Board of Trustees:

One related to the compensation of the keeper. An appropriation covering his salary has been annually made and disbursed by the Comptroller.

The second refers to appropriations for restoring and improving the property and the sums which have been provided by the Legislature thus far have been paid upon vouchers itemized as provided in the State Finance Law, after approval by the President of the Board.

The third fund which amounted to one thousand dollars ($1,000) per year, was expended under the direction of the Board for repairs to the property and the care of the building and grounds, and itemized vouchers for such expenditures have been filed with the Comptroller and an annual report and statement thereof, verified by the President of the Board, accompanied such annual statement.

These bills became laws June 26, 1911. (See Chapter 440 of the Laws of 1911.) The ten trustees were appointed by Governor Dix on July 26, 1911, and have continued in office since then, reappointed as their term expired, with one exception.

Appropriations have been made from time to time by the Legislature for various restorations.

Two years elapsed before the Board of Trustees were able to take possession of the property, as it was the consensus of opinion of those interested that occupancy should be granted to the Sisters until their new home was in readiness for them. As soon as the Board of Trustees had possession, eminent architects were consulted as to what was necessary for the restoration, and after careful consideration of the property made valuable and extensive reports which were most helpful to the Trustees.

In February, 1914, a law was enacted establishing a Department of Architecture, and enlarging and defining the powers and duties of the State Architect. The Schuyler Mansion, as a public

building of the State, came within the provision of this act, and since then the Board of Trustees have had the valuable cooperation of the Department throughout the restoration of the Mansion. The Board wishes to express its appreciation and thanks to the State Architect, Mr. Pilcher, and his Deputy Executive, Mr. Sussdorf, for their painstaking research, their conservative attitude toward the restoration of the old house and the taste and skill in the artistic designing of the caretaker's cottage. Plans for the restoration and designs for the mantels and woodwork have all been made in the State Architect's office, and adopted, after being passed upon by the Board of Trustees. All contracts for work done on the house, except wall papers and draperies, have been submitted and approved by the Architect's office.

The first improvement was the building of the attractive and comfortable Dutch house for the caretaker, in the cellar of which the steam heating plant was installed, the heat being conveyed to the Mansion by underground pipes and then brought into the large fireplaces, giving a pleasant temperature to the entire house, and insuring safety from fire.

It was found that the house needed renovation and repairs from cellar to roof. New beams and supports were necessary for the safety of the house, straightening the beams of the roof, the leveling of the dormer windows, rebuilding of chimneys and an entire new roof. The main floors had to be removed, leveled and replaced with new floors. It was considered necessary to remove the plastering throughout the entire house and in many places to supply the broken laths. The yellow paint on the outside of the house so long familiar to us was found not to have belonged to the original structure and had to be removed. All the outbuildings added since 1804 were removed, restoring the house to its original proportions. The interior woodwork was covered with a yellow paint which it was necessary to remove and replace with the paint of the period. New window frames with eighteenth century glass replaced the modern frames and glass of the entire house. Outside shutters for the windows of the first floor were installed. All this consumed the appropriations without much to show for it, but those who have renovated old houses will understand the expense involved. In the carrying out of these details the Executive Committee of the Board has given conscientious supervision.

Members of the Board have visited the historic houses of our country: Mt. Vernon, the home of Washington on the Potomac, and his headquarters at Newburgh, N. Y., also eighteenth century houses on the James river, Virginia, in the environs of Philadelphia, Stenton, the home of James Logan built in 1728, the

Chew house built in 1761, the Wyck house, the oldest house in Germantown, built in 1690, all historic landmarks of Germantown, Penn.; the headquarters of Washington at Valley Forge, the Van Cortlandt and Philipse Manor houses near New York City, and the old houses at Portsmouth and Salem in New England. To the officers of the societies in charge of these houses, the Trustees are indebted for much kindness and helpful suggestions.

Outside expert advice from men eminent in their professions and from specialists in eighteenth century restorations have been obtained by the Board and submitted to the State Architect, the expense being defrayed by the members. As a rule the opinions so obtained have coincided with those of the State Department of Architecture.

That the Board of Trustees have still much to accomplish they are fully aware, especially in regard to the restoration of the grounds and the building of the west and south walls for the protection of the property; it was thought best, however, to open the house and to exhibit it as it is, rather than to delay doing so. Also it is hoped that by thus taking the public, as it were, into their confidence, the generous cooperation from the public, especially from the citizens of Albany, may be secured, and that gifts and loans of old furniture and Revolutionary relics, and money to buy old furniture may be given. A room on the second floor will be provided with locked glass cases for relics and manuscripts. A night watchman will insure protection.

The Trustees acknowledge gratefully the gifts already received. Descendants of General Schuyler and Alexander Hamilton have furnished the "Hamilton room" (which tradition makes the scene of his marriage to Elizabeth Schuyler) with inherited eighteenth century furniture, several pieces of which came from this house; and with replicas of a sofa and four chairs which originally stood in the drawing room in General Schuyler's day. A portrait of General Schuyler has also been given by Schuyler descendants. Citizens of Albany have given several pieces of furniture which were originally in this house, among them a valuable card table with certified letter, and an antique chair with silver plate bearing the name of Philip Schuyler. These were the property of Mrs. John V. L. Pruyn and were the gifts of her daughters. The Albany Chapter of the Colonial Dames subscribed a sum of money towards the purchase of two historic and much needed pieces of old furniture. Our first gift was a quaint old spinning wheel presented by a collector. Another spinning wheel is loaned and some handsome old chintz and coverings and drapery for a four-post bedstead, have been given

by the Mohawk Chapter of the Daughters of the American Revolution. A handsome pair of antique brass andirons were presented by a friend, greatly interested in the Mansion; also a pair of antique iron andirons that had been in the family of a friend 150 years; from a friend a charming Schuyler miniature painted by Josephine Thiers in 1803, and a Holland rug made 150 years ago.

The State of New York has honored itself in the purchase and restoration of this historic property, and restoring it as nearly as research, memory and history could aid those who have been intrusted with the care and responsibility of the work.

To ex-Governor John A. Dix and to the members of the Legislature, and to the citizens who, at the commencement of the undertaking, furthered and secured the acquisition of this house for the people of the State; to all who, since then, have promoted its restoration; to all who have given their efficient good work, whether of the hand or of the head; finally to His Excellency the present Governor of the State of New York, Hon. Charles S. Whitman, whose interest in this historic house, and whose good will toward it have been sincerely appreciated; and to the Legislature and State officers of the past few years and of the year of 1917, the Board of Trustees of the Schuyler Mansion tender their grateful thanks.

### Governor Charles S. Whitman's Address

Governor Whitman spoke as follows:

*Ladies and Gentlemen:*

"It is rather for us," said the great President, at Gettysburg, "to be here dedicated to the great task remaining for us."

Our meeting in this historic house to glorify an American home and to pay homage to a family of great Americans would fail of its full purpose, I believe, if we did not make this an occasion for the solemn declaration of our intention to perform our duty to our country with the same devotion that marked the life of the gallant soldier and statesman and that of his noble wife, the two splendid Americans who lived here during the fifty years that saw an American republic born in the wilderness.

This stately mansion is more than a memorial of the Colonial days — more than a monument to the worth and glory of the Schuyler family and its famous forebears. In these troubled times, when the world is in the shadow and the standards of conduct of people and of nations seem to be undergoing vast change, it is for us, and we hope it may be for other generations that,

God grant, may live in quieter times, a visualization of the fact that gentleness and courtesy, faith and honor, character and integrity are the real things of life, though all else may pass away.

To the trustees of the Schuyler Mansion the thanks of this city and of the State are due for their successful efforts to preserve this American home, with its memories of men and women who will not be forgotten as long as the nation shall endure; this home with its associations and traditions recalling traits of character which promise that as long as the nation shall endure it shall be a government of free people and honorable and fair dealing.

Personally, I am very glad that there was given to me the opportunity as Governor of the State to approve the measure for the renovation, restoration and perpetuation of this mansion as a memorial of as fine patriotism as the world has ever known. I believe that we can offer no better assurance of our intention to go through with the terrible task that is before this nation to-day than such evidence as this that we are moving on, appreciative of and guided by the same high ideals that animated Philip Schuyler and the men whose names will be forever associated with this house. It was here that General Washington and his wife rested and stood sponsors for the daughter of the household at her baptism. General Lafayette was a guest as were Benjamin Franklin, Alexander Hamilton, Steuben and Knox, the patriotic Kosciuszko and many other worthies, not forgetting Father Carroll, who afterwards became the first Roman Catholic Bishop in America.

Here the defeated General Burgoyne and staff remained as prisoners of war after the memorable battle of Saratoga. Here Aaron Burr used the great library of the house where Schuyler himself worked on his plans for the canal system of New York. By this staircase Alexander Hamilton stood with Elizabeth Schuyler, his bride. Mount Vernon and Monticello can offer no more hallowed memories.

In the reminiscences of the Baroness Riedesel (who was captured with her husband, one of Burgoyne's generals) we are told that when the captured German lady was being led with her children through the American lines, a tall, good-looking man came up to her, took her children in his arms, assured her that she had no need to worry, turned over to her his own tent and provided her with what he called "a frugal repast," consisting of "smoked tongue, beefsteaks, potatoes, fresh butter and bread" (there were no Hoovers in that war) and treated her, a captive woman, the wife of a mercenary general, a Hessian, in the wilds

of new America, with a kindness and a consideration which we know every American soldier will exercise toward womanhood everywhere — yes even toward the women of the enemy. American armies do not war on women and children.

That man, whose generous treatment of his enemies captured in war stands out as one of the finest things in our history, was Philip Schuyler, of whom the English historian, Trevelyan, declared that, "In the trying time when he was humiliated by his own government he showed the supreme of good taste." "He was like the palladin of some medieval romance," says Fiske; and the great historian is right. But he was more than that: He was the spirit of America — brave, generous, proud and chivalrous. Every drop of his blood thrilled with zeal for public service. He loved the great State which loved and forever will love him. He was one of the sturdy fathers who brought the Republic into existence and stamping their own character on the new government, made it the asylum for the oppressed of all nations —"the land of the free and the home of the brave."

To-day, across the ocean, in a foreign land, this country whose spirit is the spirit of Schuyler and of men like Schuyler, is marshaling its sons for battle, perchance for death, in a cause that is as truly the cause of freedom and of civilization as that for which Schuyler and his countrymen gave battle nearly a century and a half ago — confident in the justice and in the righteousness of their cause as were the men of '76, carrying with them over the sea the banner which has never known defeat, determined, let the cost be what it may, that where the flag of the nation shall go, there the freedom, the civilization and the enlightenment which that flag embodies and represents shall abide and remain forever.

### Dr. John H. Finley's Address

John Huston Finley, Ph. D., LL.D., State Commissioner of Education spoke as follows:

*Ladies and Gentlemen:*

In the history library of one of our great universities there hung, in my student days, a motto, "History is past politics and politics present history." It was the definition of Professor Edward A. Freeman (the distinguished English historian), who had once lectured in the room and had left this echo permanently upon the walls, where it was artificially preserved to enjoin masculine minds from intellectual dissipation. He gave history's noblest content in giving high definition to politics, but he distinguished

the two in tense only and did not permit history to think of subjects which a statesman might not discuss in a presidential campaign or print in such a journal as the "Congressional Record" (though I am not sure that this famous historian would have granted so great a latitude).

Fearing to trespass on this field in either tense, I have had to look outside the conventional colonial histories and the pages of Trevelyan's "American Revolution" for my brief contribution to this occasion which the Governor has made historic.

When General Schuyler said, "As for me and my house, we will serve our country," he included some whom history (of Freeman's definition) has ignored, though that same history must have looked admiringly in through these windows at them. And it was a fine use of the word "house," one must say in passing, that made this mansion include all persons within its ample walls, a use that is disappearing in these days when houses are but sections of a block or of a tower of apartments, and the household more ephemeral or changeful than the groups which the early houses were wont to hold together.

"As for me and my house"—how many are saying the identical words to-day—"we will serve our country,"—not only the men but the women, all in their several ways. Last Sunday I rode through a mill town not far distant and from scores of little houses I saw the service flag with one or sometimes two or even three stars proclaiming for those who dwelt within, "As for me and my house we will serve our country." But what a galaxy every street would be if there were a star for every wife or mother or sister who served with infinitely greater anxiety and sacrifice and suffering even than those for whom the new stars are shining in every street, sky and even out upon the country horizon.

Nor was there a Red Cross badge then, but there should now be one upon the tomb of her who was once the light of this house—one who when driving, in the face of Burgoyne's advance, toward Saratoga to save and bring back her household treasures said: "The General's wife must not be afraid." Mrs. Schuyler lived the wife of an officer through two wars, caring in the first for wounded officers, prisoners of war; later transforming a great barn into a hospital, tearing up sheets and table-cloths for bandages (but with no such meticulous and thoughtful instructions for their rolling as guide the hands of thousands to-day), and surviving these experiences to see her heroine daughter with her infant sister narrowly escape death upon this stairway, where even history has stopped to look at the mark of the savage's tomahawk.

And history looked in again — or was it a little time before — when the matchless Alexander Hamilton appeared on the landing of that same stairway with beautiful Betsey Schuyler, his bride, and might have looked in again if the rest of the daughters had not leaped through the windows to marriage instead of walking "bewitchingly" down the stairway.

I may not mention scores of men distinguished in American history who came to this spacious place in the pastures, except to note their entrance, for they came to talk that of which history is made — Washington, Franklin, John Jay, Carroll, Livingston, Knox, Duane and scores of others. But one may note the hospitality which invited those of other lands: Lafayette, Baron Steuben, Marquis de Chastellux, and even Burgoyne who was lodged in the best apartment of the house for several October days after that one on whose anniversary we are met — a treatment magnanimous and then unknown among the nations of Europe, and it may be added, little practiced even to-day when a more barbaric warfare than that of North American savages is daily witnessed.

There is a tradition of the Schuyler family that at a banquet when General Burgoyne was in this house, he rose to his feet and pledged a toast "America and England united to rule the world." It is sometimes stated that the toast was really as follows: "The future will see America and England united to save the world. Let us drink to this sacred union."

But if enemies even were treated not only humanely but hospitably, one can estimate with what spirit of welcome friends were received. Particularly gracious were those of this house to the French who came, in those days, as for example when the Marquise de la Tour du Pin — exiled in the days of terror — to whom General Schuyler said with Gallic gallantry, "Now I have a sixth daughter." And when one reads her charming letters one knows why she should have found such intimate welcome. It is to these letters that I have turned rather than to Trevelyan for they give us delightful glimpses of the life that was once on these lordly hills long before Henry James saw in the "glaze of all but filial tears" the city as a rich-voiced gentlewoman behind some gable window of Dutch association offering him the "entertainment of antique Albany" in a "quaint silver bowl" from which because of his hurried journey he had, "all wistfully" and "all ruefully" to avert his lips.

Fortunate are they in exile or at home to-day who sit at the table of this rich-voiced matron, but as fortunate they who in rougher and more unkindly exile long ago found the hospitable door of this house in Albany.

Here after spending some weeks at the mansion, the Marquise de la Tour du Pin and her husband procured a farm not far from Albany where she proceeded (without assistance of any domestic science courses) to prepare herself for the task of directing her household as a farmer's wife, beginning, as she says, by forming the habit of getting up at three o'clock in the morning. And here is a self-painted picture of herself — who had been lady-in-waiting to Queen Marie Antoinette,— which I with some masculine timorousness venture to reproduce in order to suggest an analogous war-time saving that might promote the purchase of Liberty Bonds:

"I adopted, without making any circumstances of it, the dress worn by my neighbors, the farmers' wives; the woolen skirt of black and blue stripe, the little short gown of unbleached muslin, the colored kerchief, my hair parted as they wear it, and held in place by a comb, in winter gray or blue woolen stockings with moccasins made of buffalo hide, in summer cotton stockings and shoes."

In this simple garb, this same late lady-in-waiting to a queen was found one day by the great Talleyrand, when she was attempting, hatchet in hand, with the assistance of a cook book (Le Cuisine Bourgeoise) to cut a leg of mutton, in preparation for roasting — the eminent Talleyrand commenting that no one could "split a leg of mutton with greater majesty" and returning the next day to partake of it.

And in like garb she was on another day when the Duc de Liancourt, a great French nobleman, appeared at the farm. She suggested driving to Albany to present him to the Schuylers and van Rensselaers. He consented evidently with some hesitation noticing her apparel, and came in his shabby garments of travel to find her in a "charming dress and well-made hat (though no milliner had been employed to make it)"— observations which I quote from the letters — only to be told that she would not take him to the van Rensselaers and Schuylers unless he would change his clothes, whereupon he returned to the primitive Ten Eyck to attire himself more suitably. "The transformation," she remarks, was, however, not as complete as she had hoped, and she "reproached him bitterly for the patch adorning the knee of his nankeen trousers brought from Europe and much the worse for wear from constant washing and ironing."

But as these two come up the drive in the wagon "drawn by two excellent horses in shining harness," we shall not notice the patch on the knee or the mode of the hat that had never seen Paris, for are these not now our allies making superhuman sacri-

fice, forgetting fashion and eschewing every extravagance in a common cause.

But there is still another tribute to the house than that of the famous and numberless guests who came to it from this country and abroad (and what a procession they would make if we could but evoke them); it is the tribute of the love and longing of those who were kept far from the house. A collection of delightful letters from one of the daughters, Angelica, Mrs. John Church in London, has come into my hands. One of those, addressed to her mother, speaks of a ball given by her to the Prince of Wales (George IV) who, as she said, "did me the favor to stay from one o'clock till five in the morning, a favor he has not conferred upon any other lady this winter at a ball," but very near it is another in which she says, "I am not too happy. Can I be when on this side of the Atlantic?" and still another in which she writes: "The desire of returning to America takes away all relish for the present. My situation may be compared to the needle which is always pointing toward the pole but never reaches it — thus to waste one's life in a foreign climate, to find in love, in cheerfulness and riches the sad idea that it is all expended far from home, far from all one has loved. I have a mind to commit treason that I may be banished or rather recalled from exile."

What a beautiful tribute to a country, whose love was learned in this mansion whose brave master dedicated himself and "all his house" to that same country from which she was in exile.

But his "house" was not alone those who lived here between 1762 and 1804.

The first house, by a singular coincidence, I ever entered in the State of New York was that of a descendant of General Schuyler — the father of two who are here this afternoon. And if one has not been born in this State of New York, I could wish him no greater fortune than to enter the State by the door of that house.

What these descendants of this house have done for the sick in the days of the Civil War, for the aged in the poor-houses, for orphan children, for nursing in the hospitals, and supplying books and newspapers to patients, and notably in behalf of the insane of this State, should be written in history and not in this tribute, for it has been political service of the highest definition though recorded it will probably be under other names than theirs.

I remember that when we were celebrating in Chickering Hall in New York in 1892 the notable achievement of legislation for the insane, for which one of these descendants was responsible, Dr. van Dyke told the story, which I have often repeated, of the

French officer, who was hurrying through the streets of Paris in a time of siege to join his regiment, and who when told that it was idle for him to go as his regiment was already in action, said that he must go for he was "zer leader." Men had their names attached to bills and to petitions and articles as "leaders" but the real leader was in action and brought the battle to victory. She was a true descendant of General and Mrs. Philip Schuyler,—and her sister was ever at her side as she sits here to-day.

So is this house of Philip Schuyler dedicated to the uses of the State. So does the State take title not only to its walls and its trees and the bit of earth on which it stands, but also to the glorious memories which belong to the house. And can this State do better in iterating its own determination in these days of new crisis than by taking over the legend under which the Master of this house and all within it fought and suffered and labored for the establishment of this free and independent nation, and, thinking of its entire population as its own household, say:

"As for me and my house we will serve our country."

# APPENDIX D

## CHAMPLAIN AND THE ONEIDAS IN 1615

Identification of the Site of the Indian Fort at Nichols' Pond, about Three Miles East of Perryville, in the Town of Fenner, Madison County, N. Y., attacked by Champlain on October 11, 1615.

By William M. Beauchamp, S. T. D.

# CHAMPLAIN AND THE ONEIDAS IN 1615

By William M. Beauchamp, S. T. D.

In the following paper is summarized the evidence which goes to prove that the Oneida Indian fort which Champlain attacked on October 11, 1615, was located at Nichols' Pond, about three miles east of Perryville, in the town of Fenner, Madison County, N. Y. (See plates 44–47.)

In Dr. Orr's 29th annual report on the Ontario Provincial Museum, 1917, is an article on "Cahiague or Mitche-kun-ing," the latter word being there interpreted as *the fenced spearing place,* rather than the great or notable one. Cahiague, Champlain's rendezvous — now Orillia — is also defined, by analysis, and "the meaning is in the Huron tongue, *At the fish-spearing place.*" As weirs and fish-pots were used there I think the latter word preferable to spearing. In the Onondaga dialect Ka-ah-he represents a *fish-pot* and Kah-sa-kwa a *harpoon.*

The Huron town was three leagues, according to the narrative, from the actual fishing place at the Narrows. The contributor of the article shortens this to three miles without hesitation, that being the real distance.

He also states that Champlain had 2200 warriors with him, but unfortunately cites no authority. As this number would certainly require 200 or more canoes in crossing Lake Ontario, I would reduce it by more than one half, especially as the Oneidas could not then have had more than 250 warriors, probably less. Indeed 100 canoes would have been hard to conceal. Beside which they expected 500 more men to aid them. To array 2700 men against 250 would have been fearful odds, even though the women did their part. Half that number ought not to have suffered defeat.

Champlain set out from Ca-i-ha-gue, Sept. 1, 1615, with a large party of Indians and a few French, and they were soon gliding down the River Trent to Lake Ontario, which they crossed

near its eastern end, landing in what is now New York, and concealing their canoes near the shore. For four leagues they traversed the sandy beach and then struck inland. In four days they "crossed numerous streams and a river issuing from a lake which empties into" Lake Ontario. "This lake . . . . contains several beautiful islands and is the place where our Iroquois enemies catch their fish, which are there in great abundance." All agree that this is Oneida lake.

On this long way they had seen no one, but after passing this river their scouts brought in some prisoners. The next afternoon they reached the strong fort of the enemy, where a camp was made behind a low ridge. A fight at once took place, in which the French had to join, and there was some loss on both sides. The Oneidas retired to their fort, and the invaders did the same.

A council was held and means were taken to reduce the stronghold. The next day the attack was recommenced. Champlain's plans worked well, but his savage allies did as they pleased, almost splitting his head with their yells, and the attack utterly failed in three hours' time, Champlain himself being wounded. Another council was held, and all the chiefs would promise was to remain four days, awaiting aid. This did not come, and all decamped Oct. 16th, pursued for half a league by the enemy. Champlain was borne away on the back of an Indian, suffering terribly, but they found their canoes unharmed and returned safely to the Huron country.

Mr. Orsamus H. Marshall, of Buffalo, first called attention to this invasion of the Iroquois country in a translation of the great discoverer's journal, with comments. This was read before the N. Y. Historical Society in March, 1849, appearing in the Proceedings of that year. He used the journal published in 1632, without the map, and concluded that the party crossed Lake Ontario by the shortest safe route, landed at Stony Point, Jefferson Co., followed the shore to Salmon river, went thence by the old trail to Oneida lake and Brewerton, and then to an unknown Iroquois fort on Onondaga lake.

In 1877, to show they did not reach Canandaigua lake, he re-examined the question with the same results, and his paper

was the initial one in the Magazine of American History, vol. 1, Jan. 1877. The earlier article had been partially copied by Mr. J. V. H. Clark, in his history of "Onondaga" (1849, vol. I, p. 252). Mr. Clark said, p. 256, "It is thus satisfactorily shown that this Indian fort was on the shore of Onondaga Lake; and it is highly probable that it was on the ground subsequently occupied by Sieur Dupuis in 1665, (1656) and also by Count Frontenac, in his expedition against the Onondagas, 1696, and by Col. Van Schaick in 1779. The locality was always described by the Fathers as being destitute of trees, and as being a place of surpassing beauty." The French, however, cleared the land.

In 1877, Mr. Marshall quoted Mr. Clark's opinion as decisive. On this Mr. George Geddes, whose father surveyed the fort in question, replied in a paper in the same magazine (September, 1877, p. 521). In this he showed that there were few traces of Indians at that spot, and no suitable site on the lake. He seemed to favor some place near Jamesville, crediting the fabulous massacre of 1669, and overlooking the fact that the Onondaga town of 1696 was but a mile south of that village. He also accepted the erroneous statement that Father Jogues was at Onondaga in 1642. However, he favored Mr. Marshall's general solution, though in a negative way. The latter appealed to me, and, at his request, I made a thorough search of the lake shore, finding no suitable site. In fact most relics there are pre-Iroquoian.

Meanwhile, Gen. John S. Clark, of Auburn, was looking up sites, and called on me, Dec. 28, 1876, and about the same time on Mr. L. W. Ledyard of Cazenovia from whom he had new ideas. He then stated his theory before the N. Y. Historical Society in April, 1877, before visiting Nichols' Pond, and was strongly supported afterwards by Dr. John Gilmary Shea, in the Pennsylvania Historical Magazine, vol. 2, p. 103. This eminent scholar never inspected the ground, but both trusted the map usually called Champlain's.

In a second article, August, 1878, Mr. Marshall rejected this map, on good grounds, and vigorously criticized all three writers. Dr. Shea said, "The map is evidently Champlain's," and quoted

Gen. Clark as saying that Antouhonorons was "but a form of the name Ontwehonwe (Men alone, the only men) which the Five Nations applied to themselves, the tribe attacked by Champlain being really the Onondagas." This is a double error, for the Onondagas were then a little west of Cazenovia lake, and the names mentioned are radically different, Gen. Clark knowing little of Iroquois dialects. Dr. Shea concluded with an interesting account of Etienne Brulé, who brought the 500 Carantowanne (Big Tree) warriors to the spot two days after Champlain left it.

I heard Gen. Clark's address before the Pioneers' Association in Syracuse Sept. 5, 1877. He then showed me his note book, Champlain's plan on one page, closely corresponding with his own on the opposite. I was much impressed by this, but why he should have thought this an Onondaga fort I do not understand.

"A Long Lost Point in History," by my friend, Mr. L. W. Ledyard, of Cazenovia, was read before the Oneida Historical Society in 1878, which gave an interesting account of local sites and relics. Gen. Clark came to him late in 1876 hoping to find local conditions favorable on Cazenovia lake. None appeared, but Mr. L. suggested Nichols' Pond. It was winter and they had to wait. I follow Mr. Ledyard's interesting account of the trip: "In the following summer Gen. Clark came again, and we arranged to meet immediately on the ground to be examined, to learn if there was to be a new disappointment or a final success.

"The place was one that had been long recognized as a very important one in Indian times, and it was roughly described (and erroneously) in Schoolcraft's work, many years ago. It is east of Perryville, and near the Mile Strip four corners, on a farm owned by Mr. Nichols. Here the writer formerly excavated with success, and Mr. Frank H. Cushing, who was connected with the Smithsonian and then working for that institution, had unearthed many rare and interesting relics, which are now in that government collection.

"A large part of the area that bears evidence of having been included in the Indian ground has been cultivated for many years, but part remains with venerable forest trees of great size. Where the plough has been, many bits of crockery and broken implements

are found; while in the undisturbed ground can be seen marks where the deeply set palisades decayed, where graves were dug, and deep pits indicate where grain was cached or stored. A good deal of the ground has been dug over by relic hunters, who, for many years have enriched their cabinets from this abundant source. From high points adjacent a wide view extends before the eye, one of unusual extent and beauty, and a watch or alarm fire lighted on this commanding height would be seen from near Lake Ontario to the western peaks of the Adirondacks, and similar fires equally remote would be plainly seen from these overlooking points. A small pond, where the ancient water mark was once much higher, is fed by a stream that enters and leaves it on the south, and a low broad knoll lies between these brooks.

"Such, briefly, is a mention of the place where the writer met Gen. Clark by appointment, to test its features with Champlain's words and illustration. The General had reached there the day before, and had already, with his fine engineering skill, made an accurate map, which so fully corresponded, even in minute details, with his preconceived ideas of the site of Champlain's fight, that he rose, after a sleepless night of thought, fully satisfied that, after 262 years of concealment, he had brought to light the *earliest* historic point of Central New York. It was with feelings very deeply stirred that our party went over the ground, seeing the pond, the two streams, and the low wide central ground they surrounded on north, east and west, and even the small rise of ground, the old sketch shows beyond the east creek; then traced the palisade line, and found beyond its limit many graves, perchance of savages that fell before the first shots fired amid these hills while defending their homes."

Mr. Ledyard sent me a copy of this account with directions how to get there by way of Perryville; a pleasant way of approach, though all my later trips were via Canastota or Oneida, the former being the most direct for me. He was mistaken in ascribing an erroneous description of the site to Schoolcraft. Very erroneous it probably was, but it was of a place farther east, which I have not yet visited.

After my careful examination of Onondaga lake, I first visited Nichols' Pond May 26, 1879, and published a newspaper account of both, of 230 lines, from which extracts are made.

"Sometimes the advocates of Nichols' Pond, describing it as it appears to them, have not given a very clear idea of its surroundings. I had to revise all I had read, and my readers may have to do the same. The fort is in an undulating farming country. * * * The village site is a low, broad, open woodland, merging into cleared land on the south, and embracing several acres. At the end of this low knoll a stream flows northward into the pond, on the west side, and then issues from it on the east side, flowing in a southeast direction and crossing the road at some distance. * * * It needed but a short examination to show that Champlain's picture was not made on the spot."

I was disappointed at first, simply because so much had been claimed. Differences were pointed out, but an obvious resemblance was conceded. The picture, however, is as correct as many others which illustrate Champlain's works.

At this time I thought the water nearly as high as in 1615, and in this I felt no disappointment. The next visit was Sept. 18, 1882, when I carefully plotted the main and undisturbed part of the site, the water being much lower, but showing the older shore line. No undergrowth then encumbered the spot. As before, I found no post-holes, nor could there ever have been any toward the pond and streams. This is negative testimony, while Mr. Ledyard's is positive. He, with Gen. Clark, "then traced the palisade line," apparently on the east side. They were my valued friends and competent observers. Something they saw which I did not see and have not yet seen, but the fort was of unusual construction and perhaps not uniformly built. The eastern stream may have followed the line for a few feet, but then turned away. The fort itself took in part of the pond, thus insuring a ceaseless and abundant supply of water. Mr. A. W. Palmer, in his excavations, said he found some buried pickets still in their holes below the water line, where digging was easier than on the higher and stony ground. These were the central posts, omitted where basal logs were used, but furnishing an equally strong and continuous defence. Of course, a favorable time was taken for

placing these, but a mere trench would soon be filled with sediment, closely packed around them. Mr. Palmer was an old resident and valued helper, recently removed, and I would have prized his aid in my last examination.

In the Documentary History of the State of New York, vol. 3, p. 15, 1850, Dr. E. B. O'Callaghan had a note on locality, saying, "The point at which the above engagement took place is marked on the annexed map. It seems to have been fought in the neighborhood of lake Canandaigua."* Mr. Marshall easily refuted this, being a very able writer, especially on questions of this kind.

Francis Parkman, in Pioneers of France in the New World, 1866, p. 373, followed this western indentification at first, saying, "It was a town of the Senecas, the most populous and one of the most warlike of the five Iroquois tribes, and its site was on one of the lakes of central New York, perhaps Lake Canadaigua." He added a note, "There can be no doubt that the Entouohronons or Ontuoronons of Champlain were the Senecas, whose western line at this time was the Genesee. Lake Ontario, the Lac St. Louis of the French, was called by the Hurons the Lake of the Ontouorons. Hence its present name."

This is an error, Ontario being from *Ganiatare,* a lake, and *io,* combining the ideas of greatness and beauty. The common early Indian names of the Onondagas and Senecas differed little in form or meaning. The League was then very new, and so Champlain said, "The Yroquois and the Antouhonorons make war together against all the other nations, except the Neutral nation." A distinction was thus often made between the Yroquois or Mohawks, who were the valley people, and the other four, who were all highlanders. Similarly the Dutch long divided the Five Nations into Maquas and Senecas.

Mr. Parkman's changing views appeared in his 17th edition (1880), perhaps before, when he said, "It appears to have been a fortified town of the Onondagas, the central tribe of the Iroquois confederacy; and it stood to all appearance, within the limits of Madison county, some miles south of Lake Oneida." He added

* See description of Champlain's battle in Documentary History of New York, III, 3–24.

this note, "Champlain calls the tribe Antouoronons, Antouhonorons, or Entouhonorons. I at first supposed them to be Senecas, but farther inquiry leads me to believe that they were the Onondagas. Mr. O. H. Marshall thinks that the town was on Lake Onondaga, and supports his opinion in an excellent article in the *Magazine of American History*. General John S. Clark has, however, shown that the site of an ancient Indian fort in the town of Fenner, Madison Co., fulfills the conditions sufficiently to give some countenance to the supposition of its identity with that described by Champlain. A plan of the locality was kindly sent me by Mr. L. W. Ledyard." In some later editions there was added, "and another by Rev. W. M. Beauchamp, whose careful examination of the spot confirms but partially the conclusions of General Clark. Champlain's drawing was clearly made from memory, and contained obvious inaccuracies." This was to be expected.

One other writer goes into some details, though I think he was never there. In his House Life (1881), Mr. L. H. Morgan said, "It was situated upon the edge of a natural pond, containing ten acres of land, and between a small brook which emptied into the pond on the left, and the outlet of the pond which passed out on the right. The space covered by the village site was about six acres of land, strongly fortified by a series of palisades. . . . Knowing as we now do that the space enclosed within the palisades was about six acres of land, the houses are not only seen to be log houses, but arranged and constructed side by side in blocks, and the whole thrown together in the form of a square, with an open space in the centre. The houses seem to be in threes and fours, and even sixes, side by side, and from sixty to one hundred feet long; but if this conclusion is fairly warranted by the engraving, it might well be that each house was separated from its neighbor by a narrow space or lane. It is the only representation I have ever seen of a palisade village of the Iroquois of the period of their discovery. It covered about fifty-four acres of land."

In this there is quite a difference between his ten acres in the pond, Gen. Clark's eight acres, and Mr. Marshall's insignificant pond of scarcely one acre. As the pond was certainly in the right

place, and as I was chiefly concerned with the fort, I never estimated or even outlined the full extent of the water surface. Mr. Marshall adds, however, that the pond is "nearly surrounded by a marsh of perhaps four acres more, which may, in wet seasons, have formerly been overflowed." This is a fair statement, and from the narrative and picture it would appear that Champlain was there in a dry time. Of course all shallow lakes naturally contract as centuries pass and marshy lands may replace them altogether.

Mr. Morgan's estimate of six acres for the enclosure seems rather large, and it is impossible now to prove the exact area, but no one knew better than he that all Iroquois houses of that period were of bark. Apparently most of these were near the south end, there being few traces at the north. Evidently there was no systematic arrangement, though this appealed to him. He probably included corn fields in his larger area, those in which some say the Indians were at work when the invaders appeared.

Beside other visits to this place I there addressed the Madison County Historical Society, June 24, 1902, and again Aug. 12, 1916, pointing out special features. A final and careful examination I made April 25, 1918, while preparing this paper, securing small photographs. (See plates 46 and 47.)

I quite agree with Mr. Marshall that Lake Ontario was crossed from Traverse to Stony Point, from island to island, there being no valid objections to this shorter and historic way, and but two to the landing at Henderson Harbor on the north side of the point. This, like Salmon river, was a frequented place, not likely to be chosen for the concealment of canoes on a large scale. Accordingly we find that but four leagues, instead of 20 miles, were traversed along the sandy beach to Salmon river, whence the distance should be measured backward for a starting point. The difficulty disappears if we concede that the party again chose the shortest way, coasting the west side of Stony Point, instead of the longer way on the north and east, and disembarking after passing the south shore of Sandy creek in Ellisburg. This harmonizes with the statement that "The Indians concealed all their canoes in the woods *near the bank.*" They would not have done this at

Henderson Harbor for the reason mentioned. A glance at the map will show how this solves conceded difficulties of distance as well. It is strange that no one fixed on the final landing place in this reasonable way.

While Mr. Marshall prefers Henderson Harbor he does not object to a landing at Stony creek, though I would place the hiding of the canoes still farther south, as just said. Indeed, with calm weather or a favoring wind, they might have gone on as far as Salmon river, like other voyagers, except for their desire to hide their canoes in an unfrequented spot.

It was a pleasant march along the sandy shore. Champlain says, "I observed a very pleasing and fine country, watered by numerous small streams, and two little rivers which empty into said lake, and a number of ponds and prairies, where there was an infinite quantity of game, a great many vines and fine trees, a great number of chestnuts, the fruit of which was still in the shell."

There seems no good reason to substitute another for the familiar broad trail from Salmon river to Brewerton so much used by the French at a later day, and by both Oneidas and Onondagas. Then Mr. Marshall — thus far right in the main — adopted the frequent error of placing early Onondaga in Onondaga Valley, and making Oneida lake its principal fishing place. In 1615 the town was at least 20 miles from Onondaga lake, and about as far from Brewerton as was Nichols' Pond. When Champlain estimates the distance inland as from 25 to 30 leagues, it is still wise to take the longer distance, but I think Mr. Marshall erred in thinking they reached their canoes on the 18th, on their retreat. They were simply delayed by a snow-storm on that day, and Champlain was on his feet again before land travel was over.

One sentence seems purely hearsay. Lake Ontario, or its shores, said Champlain, "is inhabited for the greater part by savages, along the sides of the streams." Thus far they had not seen a man. At the beginning of the great Huron war the Oneidas left the St. Lawrence and sought the high hills south of Oneida lake. The Onondagas had in part, lived for some time before this near the Seneca river. They also took to the hills. Northern

New York was left absolutely without an inhabitant. The Senecas withdrew their outlying villages to the east side of the Genesee. It was the same in Canada. Thus these words are capable of two interpretations. The Ko-no-si-o-ni, or League of the Long House, had the fortresses of four nations, not on Lake Ontario or near it, but far south of its shores, on streams flowing into it. Of these Champlain personally knew nothing.

The larger islands of Oneida lake are plainly in view at Brewerton, but I have never distinguished them when near the pond. The distance to a fair outlook there — not the best nor on the heights — I now find is within a fourth of a mile from this, but the supposed beacon fires were useless for no tribes dwelt between them and the Adirondacks, or even the St. Lawrence; the Mohawks were far out of sight, east of Little Falls, and several ranges of hills separated the fort from the Onondagas on the southwest. I once thought intervening swamps and the steep ascent would naturally have been mentioned, but well trod trails aided the party, and an oblique ascent was not like one in front. The day before the fort was reached, three men, four women, three boys and a girl were taken prisoners, and Champlain severely rebuked a chief for cruelty to a woman. One translation is that they were going to the fishery, 4 leagues from the fort, and another that they were that distance from the town, on their way to fish. Though Oneida lake has fine fishing grounds in all parts, South Bay, into which Oneida creek empties, is but ten miles from the pond, and other good fisheries are about as near. It is observable that Champlain makes the lake itself "the place where our enemies catch their fish." The exact spot and distance were matters of convenience and conjecture. In all this vast expanse north and northwest to the St. Lawrence and Lake Ontario, there was not a fishing village then, though there were many when Le Moyne came in 1654. War had made all a desolate wilderness.

Because of the direction in which the invaders marched and one occurrence of *Unio rectus* among relics at the pond I was at first inclined to place this fishery at Bridgeport on Chittenango creek. This fine shell occurs only in quite rapid water, in streams of considerable size, but there are several such on the

south shore of Oneida lake. The captors, of course, were far in advance of the party, and not necessarily near the line of march.

At 3 p. m., Oct. 10, Champlain reached the fort on the northeast side, the west side being a wide marsh much of the time. He made his camp behind a low ridge, sloping to the pond from the east, out of sight as he came up, but within gunshot. Some say cannon-shot, which is more literal but less appropriate. He meant to remain unseen till the next day, but had to help his impetuous savages, who were soon in trouble. The Oneidas were shown "what they never saw or heard before." It was their first experience with guns and fatal to some. On this they retired to their fort, with their dead and wounded.

The invaders also made a rude fort back of the ridge by the pond, and a council was held, at which Champlain soundly scolded them, and then advised building a *cavalier* or movable tower, which could be borne to the palisades and overlook them. Some Frenchmen, placed on this, could fire on the besieged and drive them from the galleries on the walls.

Here a word may be said on these defences, I have not seen the post-holes reported by others. Along the western side and in the very stony ground near the outlet there are certainly none. If they occur anywhere on the east side they are not readily seen. Another mode must have been used. The simplest stockade was of upright posts set nearly or close together. These might be wattled, but this was not Iroquoian. One mode was to lay logs along the ground, and place alternate long sloping pickets on either side of these, crossing and bound together near the top. Long riders would unite these above and might even form a parapet. No vertical post-holes would be required, and the base logs might be strengthened for defence by arrow proof bark or slabs of wood. A more frequent mode was to have upright posts, placed in holes nearly two feet apart, with sloping pickets on either side, crossing above and strengthening the whole. Above the riders the central posts might be cut off and a good wide parapet made. Here, I think, the second kind was doubled most of the way, and the whole structure thus becomes intelligible.

The Iroquois also used bark gutters, and the sloping notched log, or ladder, may still be found in their log cabins. They are

simpler than those in Champlain's picture. Water could not be cut off as the fort extended into the pond. All these are illustrated in my *Aboriginal Use of Wood in N. Y.*

For four hours work in the *cavalier* represented was excellently made, and in the best place for a sure foundation. The gunners are more than Champlain had with him, and all are not well placed. The archers draw the bow with the right or left hand indifferently. On the whole I think the picture was made *for* Champlain, not *by* him, and that the artist knew little of Indian life. (See plate 44.)

On Oct. 11th, the well finished tower was borne to its place by 200 of their strongest men, and the well sheltered soldiers were placed in it, doing much execution. Depressions have been pointed out as graves but I could learn of none being opened. Corn pits may have been mistaken for them, but the occupied ground is so filled with large and small stones that I think the cemetery is at some distance though perhaps not very far. Fields near by are easily worked.

Arrows and stones were discharged over the pickets in great numbers. The last would hardly be noticeable in such ground, and the former would easily and profitably be gathered up by the besieged when the fight was over. The small fires kindled against the pickets were useless. "Rivers spouted from their gutters," for inlet and outlet are both rapid streams and the mantelets, or large wooden shields were little used by those who made fires, though a favorite protection at a later day.

With a great uproar the fight this day lasted about three hours. Two chiefs and fifteen warriors were wounded and the rest were discouraged and wanted to go home. Champlain was severely wounded in the leg and knee and they thought him an iron man no longer. He persuaded them, however, to await the 500 Susquehannocks or Big Tree men, four days longer. They were to come from the Susquehanna, near Waverly, N. Y. There were frequent skirmishes from day to day, the brave defenders proving too much for their foes, who were rescued by the French. These were told "not to meddle with their fights, and that their enemies had very little courage to require" their aid. In fact but for

this aid they would never have come at all for the Iroquois, still on the defensive, were making progress in the art of war.

They now prepared for carrying off their wounded in their retreat, and "began to make certain litters," says O'Callaghan, others translating *panniers* as baskets. I think, however, that the common Indian burden frame was used, which is formed much like a jointed back and seat of a chair without legs. The burden strap is passed across the forehead, fastened to the upper part of the frame and forward corners of the seat, on either side like arms. They are usually rudely made. Other fastenings might be used, for the great explorer found himself "tumbled in a heap, doubled and strapped in such a way that it is impossible to stir; . . . . carried several days on the back of one of our Indians, thus tied and bound so that I lost all patience, and as soon as I could bear my weight, got out of that prison, or rather Gehenna."

Thus, in the narrative of Robert Eastburn, taken in the attack on Fort Bull, N. Y., in 1756, "The Enemy had several wounded Men, both French and Indians among them, which they carried on their backs," Bearers, of course, were often changed.

Champlain said, "All I remarked in their wars is that they retreat in good order; placing all their wounded and old people in their centre, they being in front, on the wings and in the rear, well armed and arranged in such wise according to order, until they are in a place of safety, without breaking their line. Their retreat was very tedious." He continues, "On the 18th of said month some snow fell which melted rapidly. It was accompanied by a strong wind that greatly annoyed us. Nevertheless we contrived to get to the borders of the lake of the Entouhonorons, and at the place where we had hid our canoes, which we found safe; for we feared lest the enemy might have broken them." Mr. Marshall thought from this that they made this distance in two days, overlooking what Champlain said about being borne on an Indian's back *several* days and doing some walking afterward.

The return distance to the canoes is made the same as that of the inland journey — 25 to 30 leagues. Actual distance from the mouth of Salmon river to Brewerton, via trail, 9 English leagues; thence by a slightly erratic line to Nichols' Pond, about the same.

Add to this 4 leagues from the concealed canoes, and we have 22 leagues. Champlain's may have been a different league, but the trail was good and fairly direct from point to point, so that the larger estimate seems quite near the truth, even if it includes the whole distance.

Safely at Lake Ontario and with easy means of travel, he hoped soon to be at his colony, but found himself obliged to spend the winter with the Hurons. This time he used to advantage. The adventurous Brulé returned two years later, having had a wonderful experience. His ceremonious friends would not be hurried, and etiquette delayed their march.

I add a brief description of my plan of Sept. 18, 1882, when the water was quite low, though at my spring visits it approached its early level. One fact is clear — the higher the water, the greater the marsh on the west side. Gunners could have fought there only in a dry time. (See plate 45.)

On the northeast, the pond nearly reaches the road, but the bank there and on the north is moderately high beyond the beach. South of the little bay is a low wooded ridge, on the north side of which was Champlain's rudely fortified camp, near but out of sight of the fort. This has many large stones on the southern slope, near the outlet. In the woods some hollows have been thought graves, but everywhere natural depressions are frequent. The ridge crosses the road and is there both higher and steeper. Along its summit and sides are many open corn pits. The rapid outlet crosses the road on the east, soon descending into a deep valley. There is a gentle upward slope from the stream along the cleared land just west of the road, which becomes moderately wooded on the low and broad ridge toward the western stream. There are no signs of occupation toward the road.

Opposite the pond and a little south of it on higher land is a great limestone boulder, 15 feet long by 10 feet broad, which I consider the second Oneida stone. The first was on an Indian village site on the Dougherty farm, a mile southeast of Perryville. It was a brown granitic rock, oval in form and about seven feet above ground, according to Mr. Palmer. Another authority of less weight says four feet. Being annoyed by frequent Indian

and white visitors an earlier owner had it destroyed. Successive Oneida villages had distinctive symbolic stones, some quite small. (See plate 46.)

At the north end of the fort site of 1615 it is very stony, and there are many natural hillocks and large stones.

The fireplaces are mainly toward the western stream and the fence on the south. Iroquois relics occur in the cultivated field beyond the fence, but I could find no lodge sites, though some were probably there at one time. There is a dumping place on the western bank, which rises abruptly from the marshy land. Pottery is all of the Iroquois type, and I have had one piece suggestive of northern New York, whence the Oneidas almost directly came.

While the outlet could not change its direction, I can see how easily, three centuries since, the inlet may have hugged the steeper bank and the stockade above, and have come much closer to the outlet than now. Gen. Clark made the occupation from 1600 to 1630, but I think the place was not occupied long for the ash beds are not deep, and alarmed by this invasion, the Onondagas changed their location about the same time, and the Oneidas went farther east. This we know.

In my History of the New York Iroquois (State Museum, 1905) I assigned this fort to the Oneida territory, but in using a plate from another book it was accidentally called the Onondaga fort.

On the outlet, about two miles north at the Helderberg range, is a succession of beautiful cascades. From the vicinity of the site the whole of Oneida lake may be seen nearly all the way down to Clockville. Thence to the lake the slightly undulating plain is over seven miles broad.

While a gateway is implied, none is mentioned. There were probably two, perhaps opposite each other, as in the Oneida castle of 1634, though one may have sufficed. In the one mentioned the main entrance was but three and a half feet wide, and the narrower two feet. The Onondagas had much wider gateways about 1615 or a little earlier, and lines of their post holes may yet be seen.

All recent writers on Champlain now accept this site, considering the picture as a mere illustration, yet one preserving essential features.

Such was this forest fight in the wilderness of New York, a little over three centuries ago; such the place. It was a small affair, for a long time attracting no attention, and yet with great consequences. Perhaps twenty-five or less years earlier, the Konosioni League had been formed, and for the first time one of its strongholds was besieged.

Suppose the expedition had been successful and the Oneidas wiped out, would this have been the last invasion, or would the Onondagas have come next? As it was, conditions were changed. The triumphs of the Hurons were ended; the Iroquois victories had at last begun. A generation later the Hurons were driven from their old homes and Huron captives filled every Iroquois town.

Even more than this. The preservation of the Oneidas made possible that great Iroquois power which so long dominated almost every Indian tribe east of the Mississippi, and was so long a defensive wall for the colonists of New York. Champlain tried his best to win the fight. Two days more of waiting would perhaps have won it. Had he known this he would have hazarded everything, merely as a brave soldier. How much more would he have dared all, could he have known that in losing his forest fight he lost Canada for France. Brave soldier that he was, he was spared that knowledge in a life filled with many plans and cares.

# APPENDIX E

## THE CATSKILL AQUEDUCT

**A Description of the Catskill Aqueduct, an Account of the Celebration of its Completion in 1917, and a Brief History of the Earlier Water Supplies of New York City**

By Edward Hagaman Hall, L. H. D.

**Secretary of the Mayor's Catskill Aqueduct Celebration Committee and of the American Scenic and Historic Preservation Society**

THE AMERICAN
SCENIC AND HISTORIC PRESERVATION SOCIETY
NEW YORK: 1918

"*I will lift up mine eyes unto the hills from whence cometh my help.*"— Psalms, CXXI, 1.

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## INTRODUCTION

In 1917, just 75 years after the introduction of water into New York City by the Croton aqueduct, the completion of the Catskill aqueduct was celebrated with impressive exercises under the auspices of a committee of citizens appointed for that purpose by the Mayor of New York, the Hon. John Purroy Mitchel.

The completion of this great engineering feat was deemed worthy of commemoration for several reasons.

Only three or four years before the Catskill aqueduct was completed, in a season of drouth, the city had counted by days how long its reserve supply of water would last, and it was a cause of inexpressible relief to the municipal authorities and to the citizens at large, in 1917, that this increased supply of an element upon which the very life of the people depends had arrived at their doors and that the imminent necessity of "rationing" water had been averted. This was the first reason for popular congratulation; and it had been brought about so quietly that unless there had been some public demonstration, few people comparatively would have realized what a great blessing had come to them and the important lessons involved.

It was an occasion also for unreserved pride in American genius which had achieved a stupendous engineering triumph. Starting at an elevation of 610 feet above tide level in the Catskill mountains, and creating four large lakes on its way, the aqueduct burrows under valleys, tunnels through mountains, dives under rivers to a depth of 1,114 feet below sea-level, bores through the solid rock of Manhattan Island, and delivers pure mountain water to every borough of the city. It is 120 miles long and is capable of delivering 500,000,000 gallons of water a day. The greatest of the famous Roman acqueducts was only half as long as this one, and in technical difficulty was, in comparison, like building houses with children's "blocks." The Catskill aqueduct is three times

as long as the Panama canal,* and involved problems and difficulties unheard of in the canal's construction. Ex-Mayor McClellan, in an article published March 7, 1917, said: "The great Catskill waterway * * * is in itself certainly the greatest piece of water-supply engineering, if not the greatest engineering achievement of any kind, in the world. I think that Gen. Goethals will agree with me that the Panama canal, while more spectacular in character, did not offer the engineering problems which had to be met and overcome in bringing an underground river all the way from the Catskills to * * * New York City."

Back of these physical achievements there were important moral and civic forces at work which it was deemed highly profitable, from the standpoint of the public welfare, to emphasize in the celebration. The construction of the Catskill aqueduct, covering a period of ten years, afforded a model of honest, clean and efficient municipal government in which every citizen should take pride. It was finished within the original estimate of expense, a commendable example of municipal economy.† It was completed within contract time‡ without a labor strike, a tribute alike to the Commission which directed the work, the contractors who carried it out, and the workmen who labored faithfully to build it. In its inception it was fostered by citizen bodies having the public interests at heart, and in its execution it had their invaluable support. It was a testimony of what disinterested civic spirit in co-operation with faithful public officials could accomplish. The celebration, therefore, while giving an opportunity for a merited tribute to the builders of the aqueduct, was also and chiefly an opportunity for teaching important civic lessons.

The celebration as a whole caused the people of New York to realize, more fully than before, the value of their wonderful water supply. There are other and smaller cities which have as good water, and as much in proportion to their needs, as New York; but the problem of supplying with water a city of nearly 6,000,000 inhabitants situated like New York is unique. There is nothing

* The Panama canal is 41½ miles long from shore to shore. Extension by dredging to deep water makes the nominal length of the canal about 50 miles.

† Mayor McClellan broke ground for the aqueduct on June 20, 1907.

‡ The aqueduct has cost to date about $140,000,000.

to be compared with it. If, by some evil magic, New Yorkers were compelled for a day to dig in the sand and wait for a few pints of water to ooze up, or to bring their water in jars from distant springs, or laboriously to pump it out of wells, they would appreciate the value of what they have when the spell was over. But human nature is prone to take as a matter of course blessings which come regularly and without individual effort; and it is to be feared that too few New Yorkers appreciate the great foresight and constant watchfulness exercised by the guardians of their welfare, the infinite pains and labor bestowed, the vast amount of money expended, and the wonderful scientific skill displayed, in bringing into their homes that priceless fluid upon which their very lives depend, and which they draw from a faucet by a mere turn of the hand.*

In causing the citizens of New York to pause for a moment in their ordinary affairs, and, from the contemplation of the great work just completed, to derive a more adequate conception of this one of their many blessings, the Catskill aqueduct celebration served its not least useful purpose.

Part I following, comprising two general chapters on water and aqueducts and four chapters on the water-supplies of New York before the completion of the Catskill aqueduct, include, substantially, the corresponding chapters in the pamphlet entitled "The Catskill Aqueduct and Earlier Water Supplies of the City of New York" written by the author for the Mayor's Catskill Aqeuduct Celebration Committee, but for the sake of completeness they are amplified with additional data from the Annual Report of the American Scenic and Historical Preservation Society for 1917, and with valuable matter from original sources not hitherto printed concerning the projects of Christopher Colles, Robert Macomb, and others. The authentic data concerning Christopher Colles cor-

* On Washington's Birthday, in 1913, when President Taft broke ground in Fort Wadsworth, Staten Island, for a National Indian Monument, to be erected under the auspices of the National American Indian Memorial Association, many Indians took part in the ceremony. After the Indians had been shown the sights of the city, one of them who came from an arid section of the West was asked what he considered to be the most wonderful thing in New York; and he pointed to a faucet, from which water could be drawn at any time.

rects some erroneous statements frequently reiterated by former writers.

The first and third chapters of Part II are substantially the same as those chapters in the pamphlet written for the Mayor's Committee, with statistics brought down to date. Chapter two, contributed at the writer's request by Commissioner Chadwick, recapitulates the history of the inception of the Catskill aqueduct from the standpoint of one of its earliest advocates.

Part III, concerning the celebration, has not been printed heretofore.

For the sake of completeness, some of the illustrations are reprinted from the American Scenic and Historic Preservation Society's Annual Report for 1917.

# PART I

## THE EARLIER WATER SUPPLIES OF NEW YORK CITY

# CHAPTER I

## THE SOURCE AND USES OF WATER

### Necessary for Life

Nothing can live without water. Where there is no water there can be no life of any kind, vegetable or animal. There is no water on the moon, therefore no living thing can exist there. If there were no water on the earth, there would be no trees, plants, or vegetables of any sort; no food to eat; nothing to drink, and therefore no human beings or lower animals. Everything would be a vast desert of rocks or sand.*

### Necessary for Food and Drink

One reason why rain makes the crops grow and why we "water" plants is that they cannot take up from the earth and absorb in solid and dry form the food on which they live. The particles of earth which form their food must be dissolved in water so that the nourishing fluid can be sucked up by the little tubes in the roots and other parts of the plants.

In the same way bodies of human beings and other animals cannot live and grow on solid dry food. Food must be mixed with water so that the little particles, carried by the fluid, will pass through the organs, arteries and veins and reach every part of the body to nourish it.

Water not only serves the mechanical purpose of carrying food in plants and animals but it also helps the chemical changes in the food which make it nourishing.

About two-thirds of the weight of the human body is water. When there is not water enough in the body for its functions, one feels thirsty; and when one feels thirsty there is nothing so wholesome and satisfying to drink as water which Nature has provided for this purpose. The use of intoxicating liquor instead of water

* Probably without the water of crystallization, the surface rocks would turn to dust.

is not only bad morally, but it is bad for the health and should be avoided.

### Necessary for Health

As water is necessary for life, so it is necessary for health. And this is so in many ways. When a person eats and drinks, the food is digested and changed in the body; the useful part goes to nourish the body and the useless part is carried off. The useless and unhealthy particles are carried away by the aid of water just as the good particles are distributed in the body by the aid of water. Sweat, or perspiration, is one means by which the body gets rid of this unhealthy matter.* There are about 2,000,000 pores in the skin of an average person, and sweat is always coming out through them, whether it can be seen or not. Evaporation of sweat cools the body; that is one reason why fanning, or a breeze, makes one feel cool. When sweat evaporates, it leaves on the skin and in the clothing the solid particles which the body has rejected. Unless the body is washed, this accumulated matter not only makes a disagreeable odor, but it clogs the pores, interferes with their operation, and injures the health. Keeping the body clean also reduces the danger of communicating disease to, or catching disease from others.† For similar reasons it is as necessary to wash the clothing as the body.

### Necessary for Sanitation

Water is necessary for health in another way. Just as it serves to carry useless and unhealthy matter out of the body, so it serves to carry the dirt and filth out of the house and city through the sewers. There could be no sewer system without an adequate water supply. Without sewers and a water supply there could be no sinks or water-closets in our houses; the streets could not be washed; filth would accumulate; and disease and death would be the result. Great epidemics, causing the death of thousands of people, have been caused by lack of proper water supply and sewerage. For that reason the City of Mexico used to be the

* It is hardly necessary to mention the other natural excreta.

† There is no disease the germs of which pass out through the pores of the skin in sweat; but for other reasons, too technical to be explained here, the danger of contagion is greatly reduced by bodily cleanliness.

unhealthiest city in the civilized world. It is as necessary, therefore, to keep the rooms of houses, the door-yards and the streets clean as it is to keep the body and clothes clean.

### Necessary for Protection from Fire

Water is Nature's great provision for extinguishing fires. Fire, when under control, is one of man's most useful friends; but when uncontrolled is one of his most destructive enemies. As civilization has progressed, the uses of fire have multiplied and consequently the dangers have increased. The Indians made fire with difficulty by rubbing two pieces of wood together; and even in the days of our own grandparents, before matches were invented, it was so difficult to make fire with flint and steel that people kept coals burning on their hearths all night so as to have fire for heat and cooking the next day; and if their coals went out, they borrowed fire from their neighbors. To-day, we have the means of making fire everywhere, and there is great danger from fire unless there is constant care to prevent it, and adequate provision for putting it out if it starts. Considering how universal the use of fire is, and how all-prevailing is the danger from it, we see how good Providence has been in providing abundant means for extinguishing it in case of necessity. Our homes and shops, churches and schools, factories and offices, and the lives of our people in them, would not be safe a day without an adequate water supply and an efficient fire department. The great damage in San Francisco in 1906 at the time of the earthquake was not due primarily to the earthquake, but to the breaking of the water pipes which prevented extinguishing the fire which started. In New York there is no danger from earthquakes, but there would be great danger from fire if it were not for the water supply and the fire department. Because of these wise provisions, New York never had a great fire like those in Chicago in 1871, in Boston in 1872 and in San Francisco in 1906.

### Useful in Industry

Man increases the products of his industry and labor by employing some kind of force other than that of his own muscles. The three principal sources of power are animals, as from horses; the

wind, as from windmills; and water, directly or indirectly, as described hereafter. Water is used directly for power at water-falls, which turn wheels and run mills and factories nearby. Sometimes the water-falls run machinery which makes electricity and the electricity is sent long distances over wires to be turned into power again to run trolley cars and factories, or to make electric light or heat. Water, when heated and turned into steam, makes the steam engine go on the railroad; runs the stationary engine in the factory; produces electricity where there is no water power; and pulls the traction-plow or other machine on the farm. Water is not only used for power, but it is used in an infinite number of ways in manufacturing processes. So universal is the use of water in industry that it may be said in literal truth that not a thing is manufactured — for food, clothing, housing, transportation, or any other purpose,— of which water does not form a part or in the making of which water does not help. If we had only enough water for food and drink and none for mechanical and manufacturing purposes, nearly all forms of modern industry and almost all the manifold activities of our lives would come to a standstill.

### Useful in Commerce

Water covers two-thirds of the surface of the earth. As man cannot walk on water, he has built boats which float on it, and thus he uses the rivers, lakes and oceans to bear the commerce of the world. New York City owes her commercial greatness largely to her situation upon a number of islands surrounded by water and upon the mainland adjacent to water; to the Erie canal* and the Hudson river, by which she is connected with the Great Lakes; and to her municipal water supply which provides not only for the life, health and safety of her great population but also for the great industries which make her the leading manufacturing city of the United States.

By reason of her water supply and her water situation, New York is enabled to employ in her manufactures more capital, to pay more wages, to use more materials, to make products of

* Before the Erie canal was opened in 1825, Philadelphia was a larger city than New York. It is generally conceded that the Erie canal gave New York the start which led to her commercial preëminence.

greater value, and to have a greater water-borne commerce than any other city in the Western Hemisphere — and (at the present time) probably in the world.*

## The Source of Water

Seeing how essential water is to life and how its use contributes to our well-being in every way, it is interesting to observe the wonderful way in which Nature supplies it for the needs of man.

Water exists in three forms. As snow and ice it is a *solid;* as steam and fog, and when suspended invisibly in the air, it is a *vapor;* and as ordinary water it is a *liquid.* The same "law of gravitation" which causes a thing to fall to the ground or a ball to roll down hill causes water to seek the lowest level. Therefore all water tends to run toward the ocean.† If nature made no provision for bringing the water back again, all the water of the earth would be collected in the lowest places and the land surfaces would be dry deserts. But the Creator has provided a marvellous system by which the water keeps going back to the land as fast as it goes from the land to the ocean.‡

When the sun shines on the ocean, or any other body of water, some of the water is turned into vapor. This vapor, which is generally invisible at first, rises into the air and is carried by the

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* The following figures for the year 1914 are taken from the United States census of manufactures:

| City | Capital | Salaries and wages | Materials | Products |
|---|---|---|---|---|
| New York City.. | $1,626,104,000 | $510,711,000 | $1,229,155,000 | $6,292,832,000 |
| Chicago..... | 1,189,976,000 | 303,630,000 | 901,658,000 | 1,482,814,000 |
| Philadelphia.... | 772,696,000 | 185,484,000 | 451,197,000 | 784,500,000 |

The commerce of this port, including exports and imports, in 1916 was $3,517,987,000, which is about ten times as much as that of Boston, this city's nearest competitor.

† This statement is sufficiently exact as a generalization. If all waters do not reach a common level it is because of some physical obstruction or evaporation. The surface of the Dead Sea is 1,292 feet below sea-level, while that of Great Salt Lake in Utah is 4,200 feet above sea-level; but physical barriers prevent their waters and those of the ocean coming to a common level. The only escape of the waters of the Dead Sea and Great Salt Lake is by evaporation.

‡ Solomon said: "All the rivers run into the sea, yet the sea is not full; into the place from whence the rivers come thither they return again."—*Ecclesiastes,* I, 7.

winds to different parts of the earth. If the vapor meets cooler currents of air, or if in rising the air expands so that the invisible water becomes heavier than the air, the vapor condenses and becomes visible as clouds. Clouds are water floating in the air. A rainbow also consists of drops of water which refract the sunlight in beautiful colors. When the clouds become dense enough, the water which forms them falls either as snow or rain. The rain and melted snow make our fresh water.

When the rain falls on the hills and fields, the roofs and streets, it immediately begins to soak through the ground or run down hill, always trying to reach a lower level. Falling and running water, or water in the form of glaciers, has enormous power to wear away the surface of the earth. It is Nature's great sculptor, which* has carved the hills and valleys and the rocks into all the beautiful shapes which we see in the landscape. One of the most wonderful examples of the power of water to carve the earth is the Grand Canyon of the Colorado river in Arizona, which is over a mile deep and measures from ten to fifteen miles from rim to rim. As the water runs over the surface or soaks through the ground it gradually collects in streams and lakes which in turn empty eventually into the ocean, and thus the water gets back to the starting point. And so it keeps up its eternal round.

When, in soaking through the ground and flowing over the surface, the water dissolves and wears away the rocks and soil, it deposits the heavier particles in lower places, but retains some minerals in solution. Upon the proportion of these minerals depends the purity of the water. When the minerals are abundant in water it is called mineral water. Water with much lime or iron in it is called "hard" water. The water from the Catskill mountains is very free from minerals and therefore is a "soft" water, very good for drinking, cooking and washing. The most common mineral which water collects in its journey to the ocean is salt. When the water evaporates from the ocean, or from a lake which has no outlet, like the Great Salt Lake, the salt is left behind, so that sea water is salty and cannot be drunk; and it is the rain which supplies fresh water for all the beneficial uses of man.

* Aided by aerial erosion.

### Religious Observances

Water is such a great blessing to man and so indispensable to his life and happiness, that all peoples of all ages, from the aborigines to the present time, have, in the forms of their various religions, prayed to God for it and thanked Him for it. The Indians of Arizona perform very beautiful "flute ceremonies" around their water pools and the Hopi Indians have a most remarkable ceremony for rain in the form of a Snake Dance, in which their priests dance around holding big snakes in their mouths. The New York Indians used to have a Rain Dance and a Corn Planting Dance; and when they passed Niagara Falls and other waterfalls they would empty a wooden plateful of tobacco into the waterfall as an offering to the Great Spirit. It was also a very ancient practice in the Old World to throw offerings into springs, rivers and lakes that were sacred. Extraordinary proof of the antiquity of this custom was discovered in 1852 when the Jesuit Fathers, who owned the celebrated sulphur springs called "Sorgenti di Vicarello" (by the ancients called the Waters of Apollo), on the western border of the Lake of Bracciano in Italy, sent from Rome a gang of masons to clear the mouth of the central spring and put the whole in order. In draining a well only a few feet below the ordinary level of the waters they came across a layer of brass and silver coins of the fourth century after Christ. As they continued to dig, they found offerings of earlier periods, gold and silver coins, silver cups, etc. The farther down they went the cruder the offerings were. Under the earliest known Roman coins were found shapeless pieces of copper, an early kind of currency, and lowest of all they found a stratum of stone arrowheads, polished stone knives, etc., of the stone age long before Rome was founded.*

Another curious illustration of more modern date, showing veneration for water, is cited by Clemens Herschel in his work on Frontinus' "Two Books on the Water Supply of the City of Rome." He mentions that in the seventeenth century, it was one of the "rules of the bath" at Baden, near Vienna, to salute the water on entering and leaving it. A guest was fined if he omitted this ceremony or spoke of the bath as mere water.

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* Lanciani's "Ancient Rome," p. 46.

The Babylonians in their religion associated Wisdom with Water and symbolized this belief in the form of a fish-god. Whatever may be thought of the Babylonian religion, it is safe to say that they were pretty near the truth in recognizing some relation between Water and Wisdom. Great and beneficent Wisdom has given water to man for his use and those people are wise who use it freely and properly.

# CHAPTER II

## AQUEDUCTS AND WHY THEY ARE BUILT

### Definition of the Word Aqueduct

The word "aqueduct" comes from the two Latin words, "aqua" which means "water," and "ducere" which means "to lead." An aqueduct, therefore, is a thing built to lead water.

### Reasons for Building Aqueducts

When a place is first settled, as will be seen in a subsequent chapter on New York's early water supply, the people depend upon local springs, streams and wells for their water supply. As the town grows, and the number of people increases, the supply from those primitive sources is not sufficient and it is necessary to get water from some other place. At the same time, with the growth of the settlement, the local sources of water become defiled and cannot be used. Therefore it is necessary to seek pure water elsewhere and to conduct it to the town through a channel so protected that it cannot be spoiled on the way.

There is another very important reason for building an aqueduct. Rain does not fall equally in all parts of the world; the same amount does not fall in all years; and the rain at a given place does not fall evenly at all times of the year. For instance, in some parts of southwestern Arizona the average annual rainfall or "precipitation"* in some years is only an immeasurable trace, and in others only an inch. In a considerable section of the area comprising southern Nevada, southeastern California, western Arizona and southwestern Utah, the average annual rainfall is only two inches or less. On the other hand, in the Mount Olympus region in northwestern Washington there is an average rainfall of 120 inches. The average for the whole United States is variously

* "Precipitation" is measured by catching the rain and snow in a vessel with vertical sides and open at the top, and measuring the depth of the water and melted snow in inches. The sum of all the measurements during a year is the total precipitation.

estimated at from 29 to 31.46 inches. The average for New York City is 44.63 inches a year.

Now a total annual precipitation of 44.63 inches over the area of 315.9 square miles of New York City would amount to 204,125,707,138 gallons, or an average of about 559,000,000 gallons a day; and even if it could be collected and used it would not be sufficient, for the average daily consumption of the city is nearly 600,000,000 gallons. But it could *not* all be collected; and if it *could,* it would not be fit to use. Furthermore, it does not fall in regular daily quantities of just 559,000,000 gallons. On October 8–9, 1903, about one-fifth of the total precipitation of the year occurred in 24 hours. So that if the city depended on the rainfall within its own area, it would have more water than it needed some days and none at all on other days. Again, in 1916, the total annual precipitation in New York City was only 33.17 inches, or only three-fourths that of the average year, and it would have been insufficient even if it could have been collected and used. It becomes necessary, therefore, to build an aqueduct leading water from an adequate and never-failing source; or to build in connection with the aqueduct dams which will hold back the water in reservoirs when there is too much and let it out for use when otherwise there would not be enough. In the accounts of the Croton and Catskill aqueducts given hereafter it will be seen how great artificial lakes have been made for this purpose of equalizing the supply.

An aqueduct has so many advantages over a local and natural water supply that they cannot all be described in these pages; but two or three may briefly be mentioned. One is, that by taking the water from high sources, it rises to a certain height in our buildings by its own pressure; which saves the expense and trouble of pumping. Water supplied by an aqueduct can also be handled, controlled and distributed more efficiently than water derived from innumerable local sources; and it can be kept purer, by preventive measures and by chemical treatment, than a local supply.

### Early Aqueducts

People began at a very early period to realize, in a dim way, some of these truths and to take artificial measures for securing water. Sometimes, like the American Indians and other primi-

tive peoples, they built reservoirs and ditches for irrigation.* As civilization advanced and cities began to grow up, channels were built to supply water for domestic use. In fact, the degree of intelligence with which any people, ancient or modern, has used water may almost be taken as a measure of its civilization. Both Mexicans and Peruvians had attained a stage of culture which led them to build aqueducts before the advent of Europeans in the New World. The best known Mexican aqueduct was that which led water from Chapultepec to Mexico City. It was about a league long. But the Peruvians, whose culture excelled that of the Aztecs, built aqueducts of great length. Prescott says, "One that traversed the district of Condesuyu measured between four and five hundred miles." It is not known when these early Americans began to build aqueducts.

The earliest aqueduct of which the present writer has found a precise record was built about 700 years before Christ by Hezekiah (King of Judah, 720–689 B. C.) to supply Jerusalem with water. There was formerly a surface conduit which conducted the water of the river Gihon to the city, but in anticipation of an attack from the Assyrians, Hezekiah built an underground tunnel about 1,700 feet long to carry the water of that stream to a reservoir or pool called Siloam. The Pool of Siloam was in the highway of the fullers' field on the west side of the city. It was hewn out of solid rock and measured 71 feet north and south and 75 feet east and west. Stone steps led down into it. This was called the upper pool. Lower down the valley Hezekiah built another pool to receive the overflow of Siloam. The aqueduct was discovered by Dr. Schick in 1886. About 25 feet from the Pool of Siloam an old Hebrew inscription tells realistically of the meeting of the two parties working toward each other in constructing the tunnel. Interesting references to this primitive aqueduct are to be found in II Kings, xviii, 17, and xx, 20; II Chronicles, xxxii, 30; and Isaiah, vii, 3.

It is not intended to give here a history of aqueducts, but to cite a few instances in order that the reader may realize, by comparison, the magnitude of the Catskill aqueduct. With the general state-

* An interesting example is the so-called Mummy Lake, recently discovered in the Mesa Verde National Park, Colorado, which was never a lake, but a reservoir for prehistoric irrigation.

ment that the building of aqueducts had been practiced in Greece and the older civilizations of Asia for centuries before the first Roman aqueduct was built, we may glance at those justly famous works which in ancient days supplied the Eternal City with water.

The greatest public works of ancient Rome, to which the city and empire owed much of their greatness and power, were roads, aqueducts and drains. As for the aqueducts, we are indebted to a great Water Commissioner of the first century for a description of them. In the year 97, Emperor Nerva appointed as Superintendent of Water Works Sextus Julius Frontinus, a remarkable administrator. In order that he might intelligently perform his duties, Frontinus made a study of the Roman aqueducts and wrote a description of them in two books entitled "De Aquiis Urbis Romæ" ("Concerning the Waters of the City of Rome").* Near the beginning of his work he names the nine aqueducts then existing. He says:

"From the foundation of the city for 441 years† the Romans were content with the use of the waters which they drew either from the Tiber, or from wells, or from springs. Springs have held, down to the present day‡ the name of holy things, and are objects of veneration, having the repute of healing the sick; as, for example, the Springs of the Camenae (Prophetic Nymphs), of Apollo, and of Juturna. But there now run into the city: the Appian aqueduct, Anio Vetus, Marcia, Tepula, Julia, Virgo, Alsietina which is also called Augusta, Claudia and Anio Novus."

The lengths of these aqueducts are not accurately known. The inscriptions on them indicate certain distances: Frontinus gives others; and measurements based on existing remains indicate others. The differences may be due to subsequent changes of locations, or to different bases of calculation. The following are their dates of construction and approximate lengths:§

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* A facsimile of the original, a translation and an interesting commentary thereon are to be found in "The Two Books on the Water Supply of the City of Rome of Sextus Julius Frontinus, Water Commissioner of the City of Rome A. D. 97," by Clemens Herschel, hydraulic engineer, published in 1899 by Dana Estes & Co., of Boston.

† Until the year 313 B. C.

‡ About the year 98 A. D.

§ Other aqueducts were built after Frontinus' times. Of the four aqueducts which now supply Rome — Vergine, Paola, Marciapia, and Felice — three of them are duplicates or reconstructions of Virgo, Alsietina, and Marcia.

| Name | Built | Miles long |
|---|---|---|
| Aqua Appia | 312 B. C. | 10 |
| Aqua Anio Vetus | 272–269 B. C. | 43 |
| Aqua Marcia | 144–140 B. C. | 58 |
| Aqua Tepula | 125 B. C. | 17 |
| Aqua Julia | 33 B. C. | 17 |
| Aqua Virgo | 19 B. C. | 12 |
| Aqua Alsietina | 10 A. D. | 20 |
| Aqua Claudia | 38– 52 A. D. | 43 |
| Aqua Anio Novus | 38– 52 A. D. | 62 (?) |

It will be seen that the longest of these was only about half the length of the Catskill aqueduct. Other details also show that even the best of them was not comparable with the Catskill aqueduct as an engineering achievement.

The oldest of them, called Appia, took its water from a spring, and was a low-level aqueduct. All of its ten miles except about 300 feet was built just below the surface of the ground. It was made of rough-hewn stones about 18 by 18 by 42 inches in size, enclosing a passageway about 2½ feet wide and 5 feet high; and was not much more than a walled and covered sewer except that it carried clean water.

Anio Vetus took its water from the river Anio. It was about 90 feet higher than Appia but was still a low-level work. Of its 43 miles, a portion of about 1,100 feet was on an artificial structure above ground. It was built of massive masonry, laid in cement and plastered on the inside. Its channel was about 3.7 feet wide by 8 feet high. It was a true aqueduct, being carried skilfully around the contours of mountains so as to maintain the elevation necessary to carry the water to the city.

Marcia was the first true high-level aqueduct. It carried spring water to the city a distance of nearly 58 miles. It had an elevation of 195 feet above sea-level. It was built of rough-hewn stone, but Mr. Clemens Herschel characterizes it from the remains he has examined, as showing "the commonplace work of the rustic ditch-builder." Its interior was 5.7 feet wide and 8.3 high at one place, and varied to 3 feet by 5.7.

Tepula, about 17 miles long, was built of homogeneous concrete, and marks the beginning of the use of that material in which the Romans were very skilful. It was 2.7 by 3.3 feet in cross section. It conducted warm water from volcanic springs.

Julia was about the same length as Tepula, and followed the same course, being built directly on top of the earlier aqueduct and of the same material. Its source was some cold springs a little beyond the warm springs of Tepula.

Virgo was a low-level aqueduct, its springs being only about 80 feet above sea level. It was only about 1.6 feet wide by 6.6 feet high, built of concrete and brick.

Alsietina brought water from a lake of that name about 20 miles from Rome and about 680 feet above the sea level. Concrete and brick were its principal materials.

Claudia took its waters from three springs not far from the source of Marcia, but was only about 43 miles long. A short distance from its intake its cross section was about 3.3 feet by 6.6 feet high. This aqueduct is particularly interesting, because it marks the highest development of the skill of the Romans in hydraulic engineering. It was constructed mainly of stone cut to regular dimensions. Built at the same time with Anio Novus, the two cost 55.5 sestertii or nearly $3,000,000, or about $6 a running foot, with slave labor. It had a tunnel about 3 feet wide by 7 feet high and three miles long through Mount Affliano. The tunnelling through the rock was by the primitive means of chiseling, and by heating the rocks and chilling them with water, causing them to crack. Claudia crossed the Campagna on stately stone arches the ruins of which are standing to-day and look like the High Bridge of the Croton aqueduct across the Harlem river, except that the arches of Claudia have only 18 or 20 feet span and the piers are only about eight feet thick in elevation, while the High Bridge arches have spans of 50 and 80 feet according to location, and the piers are proportionately thick.

Anio Novus was built of brick lined with concrete and was about 62 miles long. Some authorities say only 52. Its cross section was 3.3 feet wide by 9 feet high. It took its waters from a series of reservoirs constructed by damming rivers very much after the fashion of modern storage reservoirs, only on a smaller scale. Part of the way it was built on the structure of Claudia. In fact, some of the old Roman ruins show portions of four or five different aqueducts built on top of each other.

The Roman aqueduct represented the open cut, cut-and-cover, tunnel and overhead forms of construction and employed as

materials rough stones rudely mortised together (Anio Vetus), stones cut to regular dimensions, bricks and concrete. Sometimes the exterior was ornamental with a kind of masonry called "opus reticulatum," consisting of stones about six inches square, inlaid in concrete with their lines diagonal, producing a tile-like effect. The roofs of the conduits were sometimes flat, sometimes arched, and sometimes shaped like an inverted V, the latter being made of slabs of stone inclined against each other. These different forms of roof were used promiscuously in the same works and do not appear to have any chronological value. The interior of the aqueducts was lined with concrete to make them water-tight. At intervals there were chambers called "piscinæ," evidently used for collecting sediment; and shafts for ventilation, inspection and cleaning. The speed of the current of water was checked in some of the aqueducts by contracting the size of channel, or by abrupt turns in the course of the aqueduct. Inscribed stones were set up at various places, giving distances from the city, dates of construction and repair, and names of rulers.

The Romans knew the principle of the inverted siphon and used it on a small scale in their distribution system, but rarely resorted to it in their main conduits. The Catskill aqueduct employs this principle to such an elaborate extent in passing under deep valleys and rivers that none of it is above ground. The great inverted siphon of the Catskill aqueduct which passes under the Hudson river at Storm King 1,114 feet below sea-level is infinitely beyond any accomplishment of the Romans.

The cross-sections of the Roman aqueducts indicate their smallness compared with the Catskill aqueduct which has diameters as great as 17½ feet. The cross-section area of the Catskill aqueduct is six or seven times the size of the largest Roman aqueduct. As to capacity, Mr. Clemens Herschel, in his work before mentioned, estimates that when all nine Roman aqueducts were in operation — which was not always the case, as two or three might be out of commission at the same time — they had an aggregate capacity of about 84,000,000 gallons a day; but as much water was lost or stolen on the way, or purposely diverted outside the city, only about 39,000,000 gallons a day on the average was delivered inside the walls of the city in the time of Frontinus. The single Catskill aqueduct has a capacity of 500,000,000 gallons a day.

When the Roman aqueducts crossed the low Campagna on masonry aches they have left impressive monuments. The Catskill aqueduct has avoided such exposed structures for purposes of safety, and instead of building arcades to pass over valleys and rivers, has inverted siphons to pass under them. The aqueduct ruins on the Campagna (see plate 2), like the Roman aqueduct at Segovia, Spain, and the Pont du Gard near Nismes, France,* and others which might be mentioned, give an impression of massiveness and durability, and, above all, of the force of intellect that was behind them and extended the Roman Empire to such vast dimensions.

Frontinus, in his "De Aquiis Urbis Romae" sarcastically compares the "idle pyramides and the other useless but much renowned works of the Greeks" with the great utilitarian and indispensable structures of these aqueducts; when he says: "Tot aquarum tam multis necessariis molibus pyramidas videlicet otiosas conpares aut cetera inertia sed fama celebrata opera Graecorum."

But wonderful as the Roman aqueducts were, they were not the equals, in size or the difficulty of the engineering problems overcome, of the Catskill aqueduct, which is the greatest engineering feat of its kind in the world.

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* The aqueduct at Segovia, built A. D. 109, is 8 feet wide and 2,700 feet long and at places consists of a double tier of stone arches 95 feet high. It is still in use. The Pont du Gard is part of a Roman aqueduct built in the year 19 B. C. It crosses the Gard river on a three-storied arcade 180 feet high and 873 feet long. It is estimated that the ruins of over 200 aqueducts built by the Romans in their extensive provinces still exist.

# CHAPTER III

## MANHATTAN'S PRIMITIVE WATER-SUPPLY

### The Era of Wells and Pumps

The natural water supply of New Amsterdam and of New York City in its early years was derived from the ponds, brooks and springs which abounded on the island of Manhattan before they were obliterated by the construction of streets and buildings. Some of the ponds afforded good fishing, and there are people living to-day who remember the existence of Sunfish pond at Madison avenue and 32d street, Stuyvesant's pond and Cedar ponds, which as late as 1860 were favorite resorts for skating.*

Most of these ponds, springs and streams which once sparkled in the landscape have been obliterated by modern improvements, but a few of them may still be observed in Central Park, and on the unbuilt portions of the upper end of the island. (See plate 3.)

The earliest artificial supply was derived from wells. The geological formation of the lower end of Manhattan island was not favorable for obtaining good water, however. The rock bottom of the island is covered with alluvial deposits which appear to have been permeated easily with water from the salt rivers; while at the same time the absence of a sewer system in the early history of the town permitted much unwholesome matter to find its way into the ground. When we read that "tubbs of odour and nastiness" were emptied in the street† it is not surprising that the wells were not only generally unpleasant to the taste, but, as we shall see, were also undoubtedly at times highly unsanitary.

The wells were of the kind in the use of old country at that period, surmounted by a long pole which was balanced at one end with a counterpoise and had at the other end a chain or rope to which the bucket was attached.

* Haswell's Reminiscences, p. 541.

† Common Council minutes, 1700.

As may well be imagined, the abundance of water from both the wells and the natural springs was subject to fluctuations on account of the weather. As a single instance, we may cite the experience of the British troops on the upper end of the island in the year 1782. In September of that year, there was a great drouth which generally inconvenienced and alarmed the troops. Lieut. Von Krafft of Von Donop's Hessian regiment, who kept a diary, records under date of September 3, of that year:

"This afternoon our foragers and sharpshooters returned. They had measured at the camp but could find no water on account of the great heat of this year which had dried up everything."

The next day men were sent out to dig wells, but they could not find anything but the faintest and poorest springs, even at a depth of 30 or 40 feet. "All the wells and ditches round about were dried up." On September 27 "There was a general complaint that all the men would die soon for want of water."

The earliest wells were private enterprises, dug within the owners' enclosures, although it was the custom for several neighbors to join in meeting the expense of a well which they used in common. The establishment of a public well was first proposed in 1658 during the incumbency of Peter Stuyvesant as Director General. At a meeting of the Burgomasters held on July 11, 1658, the "Burgomasters resolved to communicate with the General relative to having a public well made in the Heere straat." * The Heere straat was Broadway. It does not appear whether this proposed well was constructed. It is a remarkable fact that at the time of the surrender of Fort Amsterdam to the English in 1664, there was no well or cistern in the fort, although just before the appearance of the English, "it was hastily provided with 20 or 24 water barrels or pitched casks removed from the ships and filled with water."† In 1667, Gov. Nicolls repaired this defect by digging a well in the fort which supplied excellent water, much to the surprise of the old inhabitants, whose previous neglect in this respect may have been due to their belief that potable water could not be found there. Later a well was dug outside the sally-

* Records of New Amsterdam, VII, 190.

† Stuyvesant's answer. Doc. Rel. Col. Hist. N. Y., II, 441.

port of the fort at the foot of Bowling Green and it became a great resort for the inhabitants who were not otherwise supplied. The pump installed in this well is the first recorded in the city's history.

In 1677, under the English, the Common Council began the systematic construction of wells in the public streets. On February 28, 1676–77 they ordered that "Severall Weells bee made in the places hereafter menconed (for the publique good of the Cytie) by the inhabitants of Each Street where the said wells shall bee made, Viztt:"— one in the street opposite the butcher Roeoliff Johnson's house; one in Broadway opposite Hendrick Van Dyke's; one in Smith street opposite John Cavileer's; one in the Water Side opposite Cornelis Van Borsum's; and one in the back yard of the City Hall at 73 Pearl street. The latter was the first stone well.

On September 10, 1686, the Common Council ordered nine more wells to be built. These were built of stone, "one halfe of the Charge of them to be borne by the inhabitants of every Streete proportionately and the other halfe by the Citty." One or two citizens were appointed to have charge of each well. The practice of dividing the expense between the beneficiaries and the city was continued as long as the public well system existed.

Some of the wells at the end of the 17th century became well known by name and their locations have been pretty well identified. Among them were the following:

| Name | Location |
|---|---|
| De Riemer's Well | Whitehall street, near Bridge. |
| William Cox's Well | Near Stadt Huys, at head of Coenties Slip. |
| Ten Eyck and Vincent's Well | Broad street, between Stone and South William streets. |
| Tunis de Kay's Well | Broad street, north of Beaver. |
| Frederick Wessel's Well | Wall street, west of William street. |
| Rombout's Well | Broadway, near Exchange Place street. |
| Suert Olpherts' Well | Near last mentioned. |

Many other wells were dug in later years and may be identified by reference to the Common Council minutes and maps.

Pumps came into fashion in the first half of the 18th century and rapidly displaced the old well-sweeps. After the city had bought its first fire-engines mentioned hereafter, it became particularly necessary to maintain the water supply, and in Novem-

ber, 1741, the Assembly enacted a law (chapter 719) entitled "An act for mending and keeping in repair the publick wells and pumps in the City of New York." This law provided for the appointment of Overseers of Wells and Pumps, the levying of taxes for their maintenance, etc. Disorderly persons frequently cut the ropes of the wells, broke the pump handles and did other mischief of a similar nature, and the same law provided penalties for such offences.

Sometimes a public spirited citizen would give a well and pump to the city if the corporation would agree to keep it in repair. Henry Rutgers made such an offer to give a well and pump in the Out ward in December, 1785. But generally the expense of the well and pump was jointly borne by the city and the neighborhood.

To give an idea of how these matters were managed at the beginning of the American period after the evacuation of New York by the British we may cite a few transactions of the Common Council.

On August 26, 1784, for instance, the inhabitants of Frankfort street petitioned for a well and pump and it was granted. The city's share of the first cost of this well and pump was £39:16:15. The cost of digging a well varied according to circumstances. In October, 1784, Silvanus Seely was paid £4:11:3 for digging a well in the South ward, but Phil Arcularius was paid £40:19:6 for digging one in Frankfort street in 1785. On November 11, 1784, the Common Council authorized a well in Catharine street and voted to contribute £7 toward it, later adding £8 more. In July, 1785, the inhabitants of Greenwich street were given permission to sink two wells at their own expense, the corporation furnishing the pumps. In a similar way in August, 1785, the inhabitants of Chambers street were permitted to make a well and stone it at their expense, the pump being at the expense of the corporation.

These street pumps were landmarks, very much like street monuments to-day, and formed convenient points of reference. For instance, when the Common Council decided in May, 1785, to grade Broadway southward from Exchange place, it voted that there should be a "gentle descent from the upper pump to the Bowling Green." The "upper pump" was at Broadway and

Exchange place. (See picture of pumps in Broad Street in plate 4.)

On April 5, 1785, William Smith contracted to keep the wells and pumps in repair at the rate of £140 per annum; but Smith's job was not a profitable one; the number of pumps and wells was rapidly increasing and the cost of repair mounting with equal pace. The Common Council, therefore, devised the system of electing two Overseers of pumps and wells for each ward; but evidently these new functionaries occasionally neglected their duties, for on September 16, 1789, the Common Council "Ordered that whenever the Overseers of the Public Wells and Pumps neglect or refuse to do their duty that the Aldn & Assist of the Ward direct the necessary Repairs; lest by the want of water from the public wells and pumps the City may be endangered in case of Fire."

During the year 1789 the Common Council approved for payment bills for repairs to wells and pumps amounting to £408:15:5½.

### The Tea Water Pump

The water from the wells in the lower part of the city served well enough for ordinary domestic uses, except drinking, but, as we said before, was brackish and disagreeable to the taste. Some time during the first half of the 18th century, however, a spring of fresh water on the north side of the present Park row, between Baxter and Mulberry streets, began to attract popular attention. This spring was probably supplied by the same underground sources that supplied the neighboring Fresh Water or Collect pond. The water was so desirable for making tea that it became famous in history as the Tea Water Pump. Indeed, it became a regular landmark and has left its impress on the real estate records of that neighborhood. The property described in deeds as the "Tea Water Pump" was a parcel 75 feet by 120 feet on the north side of Chatham street (Park row) beginning 28 feet east of Baxter street. A deed containing a reference to it as the "Tea Water Pump," is dated June 1, 1795,* and there is another of the same description in liber 169, page 334. The description there is: "Which said three lots, pieces or parcels of ground are known

* Liber 170 of deeds, p. 7.

by the name or description of the 'Tea Water Pump' or the Estate of Gerardus Hardenbrook, Sr., deceased." The same description or a similar one is found in later deeds, among which are those to be found in liber 55, page 395; liber 65, page 102; liber 66, page 454, and liber 68, page 225. The property was afterwards sold in parts. Gerardus Hardenbrook left a will dated 1755 and recorded in liber 33 of wills, page 533. About 1796 William C. Thompson, a grandson, acquired the majority interest and is undoubtedly the Mr. Thompson referred to hereafter and in Valentine's Manual for 1856, page 438. Abraham Shoemaker, referred to hereafter and on the same page in Valentine's Manual, afterwards acquired at least the central part of the 75 foot tract from Thompson and others. Valentine's authority for designating the property as No. 126 Chatham street (the old name for Park row) does not appear. No. 126 Chatham street as shown in deeds of the middle of the nineteenth century would be east of Mulberry street. If there was a numbering of the street that would bring No. 126 near Baxter street, it has not been found. The site of the pump, however, is well established by the deeds referred to.

The first mention of the Tea Water spring is in the diary of Professor Kalm, a learned and observant man who visited the City in 1748. He says:

"There is no good water to be met with in the town itself; but at a little distance there is a large spring of good water, which the inhabitants take for their tea and for the uses of the kitchen. Those, however, who are less delicate on this point make use of the water from the wells in town, though it be very bad. The want of good water lies heavy upon the horses of the strangers that come to this place for they do not like to drink the water from the wells of the town."

Shortly before the Revolution the Tea Water spring and its vicinity were made into a fashionable resort at which beverages adulterated with pure water could be obtained. A high pump with a prodigiously long handle was erected over the spring, and the grounds around it were laid out in ornamental fashion and called the Tea Water Pump Garden.

The tea water from this source was so popular that not only did people come to the pump for it, but it was delivered around town in carts which looked something like modern sprinkling-

wagons without the sprinkler. The distributors of this water were called "tea-water men," and became so numerous and active that on June 16, 1757, the Common Council had to pass "A Law for the Regulating of Teawater men in the City of New York."

At length, the big pump projecting over the street and the crowd of water-wagons gathered there became so great an obstruction to the street that in 1797 a petition for an abatement of the nuisance was presented to the Common Council. The committee to whom the subject was referred reported as follows:

"The committee on the subject of the petition complaining of the obstruction in Chatham street caused by the Tea Water Pump delivering its water in the street and by the water carts drawn up across the street when about to receive water, report that they have viewed the premises and find the matters and things set forth in the petitions to be true. That the committee have maturely considered the premises and are of opinion that the said obstruction may be removed at no great expense to Mr. Thompson, the present occupant and part proprietor of the premises, by causing the spout of the said pump to be raised about two feet and by lengthening it so as to deliver the water at the outer part of the paved walk, which would permit passengers to pass under without inconvenience; and if the water carts were ordered to draw up abreast of the spout near the gutter and receive the water in rotation it would remove the obstruction in the street." The committee recommended also that the sidewalks in that vicinity be paved.

The recommendation of the committee, except that relating to paving, were adopted, the paving being postponed for the time being.

In 1805 Abram Shoemaker petitioned to the Common Council for leave to erect works so as to conduct the water of the late Tea Water Pump into carts in Orange street (now Baxter street) as they formerly took the water from Chatham street, by which inconvenience would be avoided, and the petition was allowed during the pleasure of the Common Council.

It is amusing, in these modern days when the city authorities are concerning themselves with a great aqueduct system capable of delivering 500,000,000 gallons of water a day to the city, to read of the Common Council passing solemn resolutions about the length of the Tea Water Pump spout.

### The Primitive Fire Department

While the primitive conditions of the water supply just described existed, there was an equally primitive system of fire extinguishing. When one recalls the inflammable character of the earliest buildings in New Amsterdam and the inadequate means for fire protection, it is a wonder that the infant city was not destroyed several times.

During the Dutch régime there were a few stone storehouses and several brick houses belonging to the more wealthy residents; but most of the buildings were of wood. To add to their inflammability, the roofs of a majority of the early houses were thatched with straw or reeds, and their chimneys were made of wood or of interwoven twigs plastered with clay.

No machine for projecting water upon a fire existed in New Amsterdam. If a fire broke out, a bucket brigade was formed. Men stood in single or double file between the fire and the nearest source of water, and passed buckets filled with water to the scene of the conflagration, sending the empty buckets back by the second line of men if there was a second line.

Twenty-two years after New Amsterdam was settled, the occurrence of fires in two houses, owing to carelessness in the care of fire-places and chimneys, aroused the authorities to the necessity of organizing means of protection. They therefore ordered on January 23, 1648, that from that time forward no more wooden or platted chimneys should be erected between the "fort and the fresh water,"— that is to say, between the sites of the present United States custom house and the Tombs prison — and four fire wardens were appointed to see that the ordinance was enforced. The fines for violating this ordinance were to be devoted to the purchase of fire ladders, hooks and buckets, to be procured in Holland at the first opportunity. In 1657, the following notice was given:

"Notice is hereby given, that for the purpose of preventing calamities by fire, they long since condemned all flag roofs, wooden or platted chimneys within this City, and to that end they appointed Fire Wardens and Inspectors of Buildings, which ordinance has been and is at present neglected by the inhabitants and in consequence thereof several fires have occurred and more are to be apprehended — yes, indeed, to the entire destruction of the

City,— so that it is necessary to make provision in the case. To which end, the Director General and Councillors do ordain that all flag roofs, wooden chimneys, hay barracks and hay stacks shall be taken down and removed within four months after the publication of these presents, under the penalty of twenty-five guilders for every month's delay; and this penalty shall be claimed for every house, great or small, with reed roof, hay barrack or hay stack, or wooden chimney within the walls of the City. Hen-houses and hog-pens shall be included."

But the safety of the city was not to be secured by ordinance alone. Fire extinguishing apparatus was necessary. Therefore, in December, 1657, the Burgomasters and Schepens adopted the following order, reflecting the custom of the old country in that matter:

"Whereas, in all well-regulated cities it is customary that fire-buckets, ladders and hooks are in readiness at the corners of the streets and in public houses for time of need, which is the more necessary in this City on account of the small number of stone houses and many that are built of wood, therefore it shall be required immediately that for every house small or large shall be paid one beaver or eight guilders in seawant,* out of which funds shall be procured from fatherland 250 leather fire-buckets; and we shall also have made some fire-ladders and fire-hooks. In order to maintain the same in good order, there shall afterwards be a yearly demand of one guilder for every chimney in a house."

It was proposed that instead of sending to Holland for the buckets they be made in the City and on August 1, 1658, four shoe-makers of the town,— an important as well as necessary craft at that time — were requested to meet the authorities and consider the matter. The contract was tendered to Coenraet Ten Eyck, but he declined it. Pieter Van Haalen declared that he had not the materials with which to make the buckets. Reinout Reinoutsen, however, undertook to make 100 buckets and Arian Van Laar 50 buckets between that date and All Saints' day (November 1). The buckets were all to be made of tanned leather in the most complete manner, and for each they were to be paid six guilders and ten stuyvers, half in beaver-skins and half in wampum. By January 20, 1659, 125 of the 150 buckets were finished, taken to the City Hall or Stadt Huys at No. 73 Pearl street, and numbered.

* Wampum.

It was ordered that the 150 be distributed as follows, the assignments really totalling 152.

| | | |
|---|---|---|
| From 1 to 50. | In the City Hall | 50 |
| From 50 to 62. | Daniel Litscho | 12 |
| From 63 to 74. | Abraham Planck's house in Smith's Valley | 12 |
| From 75 to 86. | Joannes Pietersen Verbruggen | 12 |
| From 87 to 98. | Paulus Leenderzen Vander Grift | 12 |
| From 99 to 110. | Nicasius de Sille in the sheep's pasture | 12 |
| From 111 to 122. | Pieter Wolferzen van Couwenhoven | 12 |
| From 1 to 12. | Jan Janzen the younger | 10 |
| From 13 to 24. | Hendrick Hendrickzen Kip, the elder | 10 |
| From 25 to 36. | Jacobus Backer | 10 |

David T. Valentine, in his Manual for 1856 at pages 253–254, locates the above places with reference to modern streets as follows: Litscho's tavern in Pearl street near Wall; Planck's (or Verplanck's) house in Pearl street near Fulton; Verbruggen's in Hanover square; Van der Grift's in Broadway nearly opposite Exchange place; DeSille's on the southeast corner of Broad street and Exchange place; Van Couwenhoven's on the northeast corner of Whitehall and Pearl streets; Kip's on the north side of Bridge street between White hall and Broad; and Backer's on the east side of Broad between Stone and South William.

Under the English regime the pump, well and bucket system was somewhat elaborated in detail, but remained the same in principle for many years. In 1687 every inhabitant who had a house with two chimneys was required to provide one fire-bucket for his house, and if he had more than two hearths he was required to keep two buckets. Bakers were obliged to have three buckets and brewers six. At an alarm of fire, everybody who had buckets ran to the scene, and it was inevitable that their buckets should get mixed up. It was therefore customary after a fire for the Town Crier to give notice of a general exchange of buckets which had gotten into the wrong hands.

As the eighteenth century advanced, the inadequacy of the "bucket brigade" began to impress itself on the citizens as the news of Newsham's pumping engines in England became better known and on October 17, 1730, the sentiment in favor of the introduction of fire-engines into this country took shape in an act passed by the Assembly (chapter 550) which contained the following declaration among others:

"The Repairing of the said City Hall,* Repairing and Enlarging the Goals and Prisons, Erecting of Watch-Houses and defraying other Necessary and Contingent Charges for the keeping of the Peace and Preserving good Rule and Government within the said City, and the purchasing of two fire Engines which are greatly wanted for the better Securing of the said City from the Danger & Accidents of fire, will amount to a Larger sum of money than the Yearly Revenue of the said Corporation can Supply."

Therefore it was enacted that the city be authorized to raise money for those purposes by taxation. This legislation was promptly followed up by an ordinance of the Common Council, adopted May 6, 1731, levying the necessary tax. On the same day, the Common Council adopted the following:

Resolved that this Corporation do with all Convenient Speed Procure two Complete fire Engines with Suction and Materialls there unto belonging, for the Publick Service. That the Sizes thereof be, of the fourth and sixth sizes of Mr. Newshams fire Engines, and that Mr. Mayor, Alderman Cruger, Alderman Rutgers and Alderman Roosevelt or any three of them be a Committee to Agree with some proper Merchant or Merchants to send to London for the same by the first Conveniency and Report upon what Terms the said Fire Engines, &c.: will be delivered to this Corporation.

On June 12, 1731, the committee reported that Stephen De Lancey and John Moore were willing to send to London by the ship Beaver for two engines of Mr. Newsham's "New Invention of the fourth and sixth sizes, with suctions, Leather Pipes and Caps and Other Materials thereunto belonging," charging the city 120 per cent advance on the invoice price; and the committee was authorized to order the engines accordingly. The commission was promptly executed and in a few months the novel machines were in the city. On November 18, 1731, the Common Council ordered that provision be made for keeping hooks, ladders, buckets and the fire-engines in convenient places, and on December 1 workmen were employed to fit up a convenient room in the City Hall for the engines. A couple of weeks later Alderman Johannes Hardenbroeck and Assistant Alderman

* The second City Hall, in Wall street at the head of Broad street.

Gerard Beekman were appointed a committee "to have the Fire Engines Cleaned and the Leathers Oyled and put into Boxes that the same may be fit for Immediate use."

The engines thus procured consisted each of a wooden box tank on wheels upon which was mounted a suction pump. One engine was operated with a long handle-bar or brake by men standing on a platform on top of the tank. See Engineer Stoutenburgh's sketch of the first "Ingen" in plate 5. The other was operated with a long crank handle protruding from the side of the machine by men standing on the ground. Sometimes the water was conveyed to the engine by the bucket brigade and forced through a short leather hose and nozzle or "goose-neck" upon the fire; sometimes the engine was placed close to a pump so that the water could be pumped into the tank; and sometimes a suction hose was used to draw water from a well.

The next important step in the evolution of the fire protection system was the establishment of a regular Fire Department. This was done pursuant to a law (chapter 670) enacted December 16, 1737. This law provided that the Common Council could elect a sufficient number of "Strong able Discreet honest and sober men" not exceeding 42 in number who should be ready at a call by either night or day to use the fire-engines and other tools and instruments for extinguishing fires. It was provided that these persons "shall be called the firemen of the City of New York." These were in addition to the engine-men who were regularly employed. The firemen were exempt from jury and militia duty and from serving as Constables and Surveyors of Highways. The same law provided that when a fire broke out, the Sheriff, Constables and Marshals should "immediately repair to the place where the said fire shall happen with their Rods, Staves and other Badges of their authority," to aid the firemen and to cause other people to do the same, in extinguishing the fire and protecting goods from theft.

In such humble ways the great Fire Department of the City of New York, now the finest in the world, began. It would require a volume in itself to follow the growth of the department through the stage of hand-pumping engines to steam, chemical

and automobile engines and the high pressure water systems which represent its highest development to-day. (See illustration in plates 6 and 7.) But enough has been said with respect to water supply for domestic use and fire extinguishing purposes to indicate how poorly equipped the early city was for the prevention of disease and fire by water.

### Great Fires and Epidemics

The movement for a municipal water supply received powerful stimulus, from time to time, from great fires and epidemics. It will conduce to a better understanding of the events recorded in succeeding chapters to mention some of these unfortunate occurrences.

On September 21, 1776, six days after the British captured the city, a fire broke out at the foot of Whitehall street and spread to Broadway, burning up on the east side as far as Mr. Harrison's brick house and on the west side to St. Paul's chapel. Trinity church and 493 houses were destroyed.

On August 7, 1778, a fire originating on Cruger's wharf (in the block now bounded by Water and Front streets, Old slip and Coenties slip) consumed about 50 houses in that vicinity. This was during the British occupation and the military took exclusive control of the situation.

On December 18, 1804, a fire broke out on Front street south of Wall street and burned the whole block in Water street from Coffee House slip at the foot of Wall street to the next door to Gouverneur's lane, including all the buildings in Front street to the water; and also some buildings on the northeast side of Coffee House slip. The famous old Merchants Coffee House, built in 1737, on the southeast corner of Wall and Water streets, was burned.

On May 19, 1811, fire began near the northwest corner of Duane and Chatham street (now Park Row), and spread rapidly with a wind from the northeast. Between 80 and 100 buildings were burned. The steeple of the old Brick church, in the block bounded by Beekman street, Park row, Printing House square and Nassau street, and cupola of the old jail in City Hall park, caught fire, but were not seriously damaged.

The "Great Fire" broke out on the night of December 16, 1835, in the premises of Comstock & Andrews, at No. 25 Merchant (now Beaver) street and burned over the area bounded approximately by the south side of Wall street from William street to the East river, by William and South William street to Coenties lane; by Coenties lane and slip to the river; and by the river from Coenties slip in Wall street. In this area, 674 stores and other buildings were destroyed, causing a loss stated at $17,000,000. The Merchants Exchange (site of the National City bank) and the old Dutch church in Garden street (now Exchange place) were among the structures destroyed.

A notable fire in the early years of the Croton system occurred on July 19, 1845, when 345 buildings were destroyed and about $5,000,000 loss was caused in lower Broadway, Whitehall street, and in Exchange place and other cross streets to the southward.

There were epidemics of yellow fever in 1795, 1798, 1805, 1819 and 1822, and of cholera in 1832, 1834, 1849, and 1855. The epidemic of 1805 was particularly severe. John Lambert's diary says that in that year 26,000 persons moved from the interior of the City to escape the plague. Those who could not go far went to Greenwich village on the west side of the island "about two or three miles from town" where merchants and bankers had other offices for the transaction of business.

# CHAPTER IV

## EARLY PIPE LINE PROJECTS

### Christopher Colles' Water-Works

The earliest proposal to supply the city with water conducted underground through pipes was made by Christopher Colles just before War of the Revolution.

Christopher Colles was a man of genius. He thought ahead of his time and conceived many ideas which others brought to fruition and for which they received credit due to him. His first great public project for a pipe-line water-supply for New York City was interrupted by the outbreak of the War for American Independence; and his second for the connection of the Great Lakes with the Hudson river by canal was postponed by public conditions until his death left the execution of the plan to other hands. Only the singular fact, alluded to more fully hereafter, that he lies in an unknown grave, prevented the paying of an adequate tribute to his memory at the time of the Catskill aqueduct celebration.*

By means of a transcript from the family Bible of Christopher Colles received from Dr. Christopher J. Colles of New York, and from other original sources, we are able to correct certain erroneous statements of Colles' former biographers and to add some new and interesting data.

The family Bible of Christopher Colles says:

"Christopher Colles, son of Richard Colles and Henrietta Taylor, was born in Patrick st., Dublin, May 9th, 1739. He married 14th of January, 1764, Ann, daughter of Matthew Keough of Kilkenny, in Ireland, by whom he had issue" . . . etc.

* Colles' culture is reflected in living descendants who are prominently connected with the social, intellectual and art life of New York City.

The foregoing agrees with the family pedigree of Colles published in London in 1886 by Rev. W. Morris Colles, D. D., vicar of Melton Mowbray, Eng.

When Christopher Colles was ten years old his father died, and when 35 his mother died. Colles came to America in 1771, landing at Philadelphia on August 10 of that year. It is apparent that he soon came to New York, for in less than three years after his landing at Philadelphia he proposed his water-works plan for New York of which we shall speak more at length hereafter. When the Revolutionary War broke out, he promptly espoused the cause of American Independence, abandoned the waterworks plan in which he was so deeply interested and financially concerned, and with his dependent family left the city, preferring to live in almost penury as an American patriot than in relative comfort as an adherent of the Crown. Immediately after the war (in 1784) he petitioned the Legislature to connect the waters of Lake Ontario with the Hudson by a canal through the Mohawk valley. He was an expert surveyor, and was employed in that capacity by the United States government. His road map of 1789, reproduced in the Corporation Manual of 1870, is a familiar example of his work. He was an expert in mathematics, gunnery and drawing, upon which he was permitted by the Common Council (see minutes of August 22, 1787) to lecture in the Exchange; and he was a chemist as is indicated by the reference hereafter to his manufacture of "Fig Blue."

An interesting indication of Colles' inventive faculty is afforded by his proposal to maintain a "telegraph" for the purposes of communicating to the city information of the arrival of ships in the lower harbor. This, of course, was before the invention of the electric telegraph and his means of communication were therefore visual. Reference to this is found in the following extract from the Common Council minutes of August 12, 1816:

The Committee on the subject of Telegraphic communication Reported That it was understood the object of this establishment was to accommodate the Ship Owners and other Merchants of our City, who proposed to provide for the expense thereof and wished the Corporation, being a public body and the general representative of the City to direct the execution & agency of the undertaking.

From the best information the Committee have been able to collect, the proposed communication would require three Telegraphs one at Sandy Hook, one upon the High lands at Staten Island, and one at the Battery that the buildings & machinery which must be necessarily erected would not cost less than two thousand Dollars, & that two men for each Telegraph must be employed at an expense of about Two thousand Dollars per annum — a Committee appointed by the merchants upon this subject expressed much zeal for the accomplishment of it, and have put into the hands of your Committee, an agreement subscribed by about one hundred and fifty of their constitutents proposing that each Vessel arriving at this Port, by way of Sandy Hook from a foreign Country, should pay one Dollar and every Coasting Vessel arriving through the same Channel should pay half a Dollar. That the money be collected at the Custom House and placed at the disposition of the Common Council — Upon enquiry at the custom House it appears, that from April to March 1815, 1816 both months included which may be taken for an average year, there arrived twelve hundred and fifty six Vessels from Foreign Ports.

| | |
|---|---|
| which would produce at $1. each | $1256 |
| & 2792 Coasters at ½ a Dollar each | 1486 |
| | $2742 |
| Deduct 10 pr Ct for collection | 274 |
| Net Total | $2468 |

Altho' the Merchants subscribing the agreement engage to pay for each of their Vessels, they compose but a part of the owners of Vessels which arrive, and no legal means are provided for enforcing collections from others, & as the proposed chain of communication would be of very little or no use to any, but such as were provided with telegraphs on board, with a knowledge how to work them; there is too much reason to apprehend, that many would not pay the sums proposed, and the Common Council would be left without the means of remuneration, for the expense they must necessarily incur, especially as the whole of the proposed means are scarcely adequate, making no allowance for contingencies.

Therefore your Committee are of opinion that it is inexpedient for the Corporation to take any further measures in this business

Christopher Colles one of our ingenious and worthy fellow Citizens has exhibited the model of a Telegraph said to be designed

by him, which appears very fit to be used in the proposed communication, and as he has likewise been employed by your Committee they recommend that One hundred and fifty Dollars be paid for his services

(Sig$^{d}$) Jn$^{o}$ B Coles
Tho$^{s}$ R Smith

Which was approved and a Warrant directed to issue to Christopher Colles for $150 agreably to said report

In the New York City Directory of 1814, Colles' address is given as follows:

"Colles, Christopher, Custom-house."

When the New York City Directory which was published in July, 1816, was compiled, his address was:

"Colles, Christopher, engineer, 39 Cross."

Cross street was the former name of Park street, the change of name being made between 1854 and 1860. His residence in the first half of 1816, it will be seen, was not far from Chambers street, in the rear of City Hall, to which he soon moved. The circumstances of his removal to Chambers street were as follows:

The new almshouse on the Bellevue site was nearing completion and the old almshouse, which stood on the south side of Chambers street on the site of the present County Courthouse, was about to be vacated.

On April 22, 1816, the Bellevue committee of the Common Council reported that the new almshouse, penitentiary and buildings connected therewith were nearly completed and in readiness for occupancy. It was therefore voted that the chapel in the new almshouse be consecrated on April 29, and that the paupers and prisoners be removed to the new establishment with all convenient speed.

Thereupon, a number of learned societies, afterwards grouped under the general name of the New York Institution, applied to the Common Council for the use of the old almshouse as their headquarters; and on May 13, 1816, the Common Council directed that leases for occupying the almshouse be executed to the New York Society Library, the Literary and Philosophical Society of

New York, the New York Historical Society, the New York Academy of Fine Arts; John Griscomb, Professor of Chemistry; John Scudder, proprietor of the American Museum; and "certain gentlemen as trustees for the U. S. Military and Philosophical Society." Scudder moved into the new quarters so promptly that on May 27 he invited the Common Council to visit his museum that evening, and they accepted the invitation.

The occupancy of the building by these societies necessitated the engagement of someone in the nature of a curator of the building,— a position for which Christopher Colles was peculiarly fitted by his talents and ability; and in the Common Council minutes of July 22, 1816 we find a reference to Colles who had been "appointed to take charge of the old Alms House Buildings lately assigned to the use of certain literary establishments."

While residing in this building devoted to learning, Colles died on Friday, October 4, 1816. There have been many misstatements by his biographers as to this date, possibly due to confusion of his name with that of his grandson Christopher Colles who died in 1822. The date above given, however, is substantiated first by the Colles family Bible which says:

"Christopher Colles died Oct. 4th, 1816, aged 77 yrs., 4 months and 25 days."

The New York Commercial Advertiser of Saturday, October 5, 1816, contained the following notice:

DIED.

Yesterday, Mr. Christopher Colles, in the 79th year of his age.

His friends and acquaintances are invited to attend his funeral from his late residence in the New York Institution, Chamber-street, tomorrow (Sunday) afternoon, 5 o'clock.

The New York Evening Post of Saturday, October 5, 1816, contained the following notice:

DIED.

On the 4th inst., Mr. Christopher Colles, in the 79th year of his age.

His friends and acquaintances are invited to attend his funeral from his late residence in the New York Institution Chamber* tomorrow (Sunday) afternoon, at 5 o'clock.

* So printed.

A map of 1817 shows the Academy of Arts, the Historical Society, the City Library, and the American Museum bracketed as the New York Institution and located in the old Alms House Building.

The present writer has thus far been unable to learn authentically the place of Colles' burial. John W. Francis, in "The Knickerbocker Gallery," 1855, says that he was buried in the now obsolete Hudson street cemetery, or St. John's cemetery, which belonged to Trinity parish and was located in the blocks between Clarkson, Morton, Hudson and Varick streets. The present Hudson Park occupies a part of the site.* John Austin Stevens, in an article "The Magazine of American History" of June, 1878 (which contains some errors), says that Colles was "carried on Sunday afternoon, the 6th, at 5 o'clock, to his grave in St. Paul's cemetery." Stevens quotes from "The New York Gazette" (without giving its date) as follows:

"Thus in poverty closed a life which was one of unbroken devotion to the interest of humanity; yet no stone marks the spot where lie his remains. In the ancient cemetery of St. Paul's, the busy crowd which throngs Broadway observe with unfading interest the monuments erected to Montgomery, Emmet and McNevin, all of the brilliant race of which Colles was in another walk of life no less distinguished representative."

At the request of the present writer, Rev. Dr. William T. Manning, rector of Trinity parish, caused the parish records to be searched for some trace of Colles' burial in the Hudson street cemetery and St. Paul's church-yard and was unable to find any record of it. Under date of October 9, 1917, he wrote the following letter:†

* While Trinity parish was planning to erect a church and hospital on this site, the City took it for a playground under the provisions of chapter 320 of the Laws of 1887. The cemetery was removed in 1896, and Hudson Park, comprising the portion between Clarkson, Leroy, Hudson and the present Varick street, was thrown open to the public in 1898.

† Dr. Manning had previously written that there was no record of burial in the Hudson street cemetery.

Rector's Office
Trinity Parish, New York
187 Fulton Street

October 9, 1917.

E. H. Hall, Esq.,
The Mayor's Catskill Aqueduct
Celebration Committee,
154 Nassau Street, New York.

My dear Mr. Hall:

I have made injuiry and find that there is no record of the burial of Christopher Colles in any of the Churchyards of Trinity Parish.

If there were any record of his burial in St. Paul's Churchyard I should be very glad to arrange for such a service as you suggest, but as there is no such record there would seem to be no ground for holding the services.

Yours very truly,
William T. Manning

Dr. Christopher J. Colles of New York, in a letter to the present writer dated October 20, 1917, says:

"That there is no record of his burial in St. Paul's, I have known all along; but we of the family know he was buried there. My grandfather and my father always knew this to be so and often spoke of it."

Christopher Colles had eleven children, most of whom died young. His lineal descendants in New York are represented in the family of Tuthill, descendants of Christopher Colles' daughter Hannah who married John Edwards of New York. The family of Mr. William Tuthill, an architect by profession, designer of Carnegie Music Hall in 57th street and for many years Secretary of the Oratorio Society, has the family Bible of Christopher Colles before referred to.

Among his collateral descendants is Dr. Christopher J. Colles of New York. Dr. Colles is a son of James Colles, grandson of James Colles, Sr., and great-grandson of John Colles, who was a first cousin of Christopher Colles. Mrs. Robert W. de Forest of New York (born Emily Johnston), bears the same relation to the Colles family, being the daughter of Mrs. John Taylor Johnston

(born Frances Colles) who was daughter of James Colles, Sr., above mentioned.

The New York Historical Society has a fine portrait of Christopher Colles by John W. Jarvis. In December, 1917, Dr. Christopher J. Colles presented to the Metropolitan Museum of Art a larger portrait of him by an unknown artist which Dr. Colles considers a finer one than the Jarvis portrait. It belonged to Dr. Colles' grandfather, James Colles, Sr., and used to hang in the library of the latter's country place in Morristown, N. J. James Colles, Sr., was about 28 years of age when Christopher died in 1816, and as both resided in New York they must have seen much of each other. (See plates 31 and 32.)

Turning now to Colles' water-supply project,— on April 22, 1774, he proposed to erect a reservoir near the Collect or Fresh Water pond where he had reason to believe that he could get an adequate supply of fresh water, and to distribute it through the streets by means of pipes made by boring a hole longitudinally through the trunks of small trees. The water was to be pumped into the reservoir from a well by a steam engine, and to flow by gravity through the pipes.

When the proposition first came to the Common Council it was so novel that there was uncertainty as to its practicability and advisability. The Council therefore put the subject off and deliberated on it for three months. When it came up for action on July 21, opinion was still divided; but the majority were in favor of the experiment and voted 8 to 2 to undertake it. At the same time they voted to issue notes to the amount of £2,600 for the undertaking. Subsequent issues brought the amount up to £9,100.

These notes were about the size of the "shin-plasters" of the Civil War period, being about 2 1/3 by 4 inches in size. A specimen of which we have a copy before us bore on its face the following inscription:

New York Water Works
(No. 1911.)
This Note shall entitle the Bearer to the sum of
Four Shillings
current money of the Colony of New York, pay able on Demand, by the Mayor, Aldermen and Commonalty of the City of New York, at the office of Chamberlain of the said City, pursuant to a Vote of the said Mayor, Aldermen and Commonalty, of this Date. Dated the Sixth Day of January, in the Year of our Lord One Thousand Seven Hundred and Seventy Six.
By order of the Corporation.

N. Bayard.
J. H. Cruger.

On the back of the note was the picture of a pumping engine and two fountains.

It cannot be said that the Common Council proceeded with rash haste in this enterprise, for when Augustus and Frederick Van Cortlandt offered to sell to the city a site for the reservoir on the east side of Great George street, now Broadway, at what is now White street, at the rate of £600 an acre, they personally went to the new well sunk on the property and tasted the water. One can almost imagine these dignified gentlemen going to that then remote spot on the west side of the Fresh Water pond, adjacent to the marshy Lispenard meadows abounding in bullfrogs and game birds in season, sipping the water from the new well like connoisseurs of some rare vintage, smacking their lips, looking at each other wisely, and finally pronouncing a favorable verdict. Concluding "the same to be of very good quality," they accepted the Van Cortlandts' offer and told Mr. Colles to go ahead with his work.

If we do not know where Christopher Colles is buried, we know fortunately where he erected his water-works. From a memorandum kindly furnished to the writer by Hon. James P. Davenport, Special Deputy Register, we learn that the lot conveyed to the City by the Van Cortlandts for this purpose fronted 174 feet on the east side of the present Broadway, beginning at a point 52 feet south of the present White street and extending to a point 72 feet north of White street, and running through to Elm

street,—White street, of course, not being opened at that time. Judge Davenport's memorandum is as follows:

"The Northeast division (lot No. 4) of Calk Hook on the map of 1689 appeared as belonging to Jacobus Van Cortlandt (see Liber 34 Cp 467), who by his will (Liber 13 of Wills, p. 425) devised his property to his children or the husbands of some of them. A recital in a deed of Nov. 28, 1755 (Liber 35 Cp 382) shows that the Van Cortlandt plot of land was divided into four lots. Lot #1 fell to the share of Margaret Depeyster, wife of Abraham Depeyster; Lot #2 to Frederick Van Cortlandt; Lot #3 to John Chambers who had married Anna Van Cortlandt; Lot #4 to Peter Jay who had married Mary the youngest daughter of Jacobus Van Cortlandt.

"John Chambers conveyed lot #3 to his wife's nephews Augustus and Frederick Van Cortlandt in 1755 under an agreement with their father Frederick Van Cortlandt in exchange for a life lease of lot #2 to John Chambers (Liber 35 Cp 382). The City of New York subsequently acquired that part of the property extending from a line 52 feet southerly of White Street at Broadway and 40 feet 2 inches south of White street at Elm Street to a line extending from a point on Broadway 72 feet north of White Street to a point on Elm Street 83 feet 10 inches north of White Street. This property was obtained from Augustus and Frederick Van Cortlandt in 1774. The minutes of the Common Council for July 21, 1774 show that Frederick and Augustus Van Cortlandt offered to convey such ground fronting on Great George Street (Broadway) as might be needed for a reservoir, at a price of 600 pounds an acre. The Common Council on August 8, 1774, agreed to purchase the northerly part of the property of Augustus and Frederick Van Cortlandt provided on the sinking of a well the water should prove to be of good quality. Bonds were issued Nov. 15, 1774, for 1050 pounds to pay for the property (Printed minutes of Common Council Vol. VIII pp. 41, 43 & 63). If a deed to that property was given at that time it was not recorded and in 1809, at the request of the Common Council (Minutes, September 4 & September 11, 1809, Vol. 20, pp. 283, 293) Augustus Van Cortlandt, individually and as executor of the estate of his brother, Frederick Van Cortlandt, executed deed for the property to the City of New York (84 cpp. 266, 267). The City, after the property ceased to be used as a reservoir, divided it into lots and sold them at public auction."

On August 29, 1774, the Common Council appointed a committee of eight members to superintend the construction of the

works, and in November they contracted with Isaac Mann and Isaac Mann, Jr., of Stillwater, now in Saratoga county, to furnish 60,000 linear feet of pitch or yellow pine timber for the making of the pipes. The original contract, which is on file in the document room of the City Clerk in the Municipal building, reads as follows:

> Articles of Agreement made and concluded on this Eight day of November in the Year of our Lord One Thousand Seven Hundred & Seventy four and of his Majesty's Reign the Fifteenth Between Isaac Mann and Isaac Mann Junr. of Still Water in the County of Albany Gentlemen of the one part and the Mayor Aldermen and Commonalty of the City of New York of the other part as follows — viz

First of all the said Isaac Mann and Isaac Mann Junr. for and in consideration of the Sum of Two Hundred and Fifty Pounds to them in hand paid by the said Mayor Aldermen and Commonalty of the City of Newyork the Receipt whereof they hereby acknowledge and also for the further consideration herein after mentioned Do hereby for themselves their Heirs Executors & Administrators and each and every of them jointly and severally Covenant Promise and Agree to and with the said Mayor Aldermen and Commonalty of the City of Newyork their Successors and Assigns by these Presents, that they the said Isaac Mann and* Isaac Mann Junr. their Executors Administrators or Assigns or some one of them shall and will furnish and provide for them the said Mayor Aldermen & Commonalty of the City of Newyork Sixty Thousand Feet in length of good Pitch or Yellow Pine Logs in Pieces which shall be in length from Fourteen to Twenty feet or of such length as when cut shall make Logs from Fourteen to Twenty Feet each and that one fourth part of the said Pitch or Yellow Pine Logs, to witt, fifteen Thousand Feet thereof shall be of Twelve Inches Diameter at the small end of the said Log exclusive of the Sap thereof and the remaining three fourth parts thereof, to witt, Forty Five Thousand Feet of said Logs of Nine Inches Diameter exclusive of sap at the small end of each Log, and that all the said Logs which they shall so furnish shall be streight and free from Shakes and large Knots and the said Isaac Mann and Isaac Mann Junr. for themselves their Executors and Administrators do Covenant Promise and Agree to and with the said Mayor Aldermen & Commonalty of the City of Newyork their successors & assigns that they the said Isaac Mann and Isaac Mann Junr. shall and will deliver one third part of the

* The words "Isaac Mann and" are interlined.

above mentioned and described Pitch or Yellow Pine Logs, to witt, Five Thousand feet thereof of Twelves Inches Diameter exclusive of Sap at the small end of each Log and Fifteen Thousand Feet of Nine Inches Diameter exclusive of Sap at the small end of each Log on the shore of the North or Hudsons River in & upon Warren Street in the City of Newyork on or before the first day of July next and one other third part of said Logs, to witt Five Thousand Feet thereof of Twelve Inches Diameter exclusive of Sap at the small end of each Log and Fifteen Thousand Feet of Nine Inches Diameter exclusive of Sap at the small end of each Log at the said last mentioned place on or before the first day of August next and the remaining third part of said Logs to witt, Five Thousand Feet of Twelve Inches Diameter exclusive of Sap at the small end of each Log and Fifteen Thousand Feet of Nine Inches Diameter exclusive of Sap at the small end at the same last mentioned place on or before the first day of October next without fraud or delay. In consideration whereof the said Mayor Aldermen and Commonalty of the City of Newyork for themselves and their Successors do Covenant and agree to and with the said Isaac Mann & Isaac Mann Junr. their Executors Administrators and Assigns that they the said Mayor Aldermen and Commonalty of the City of New York shall and will pay or cause to be paid to the said Isaac Mann and Isaac Mann Junr. or their Assigns at and after the rate of Five Pence Current Mony of Newyork for every foot running measure of the above mentioned and described Logs of Pitch or Yellow Pine to be delivered at the City of Newyork as aforesaid first deducting therefrom the above mentioned Sum of Two Hundred & Fifty Pounds, allready paid and advanced on this Account. In Witness whereof to the one part of these Presents remaining with the said Mayor Aldermen & Commonalty of the City of Newyork the said Isaac Mann & Isaac Mann Junr. have hereunto Set their Hands and Seals the day and Year first above written

Sealed and Delivered
the words (Isaac Mann and) first interlined between the 21st and 22d Line of 1st. Page in presence of
Jos Chew
James Guthrie

Isaac Man

Isaac Man Junr.

Another paper in the document room of the City Clerk in the Municipal Building, which Dr. A. Everett Peterson identifies as the proposed lay-out of the water-pipe, is given below. It has additional interest as an almost complete list of the principal streets of the City just before the Revolution. It reads as follows:

"Beginning at the North River at the lower end of Murray Street, thence thro' said Street & across the Common to the head of Frankfort Street, thence down the same to King George Street thro' K G Street to Queen Street thro' Q Street to Bankers Street thro' Bankers Street to St James Street, thro St. James Street to the East River, and all the Streets to the Westward.

| | FEET | | FEET | | FEET |
|---|---|---|---|---|---|
| Murray | 1,330 | Moravian alley | 480 | Crown | 1,040 |
| Rob. thro' the College Yard | 1,230 | V. D. Clife & Gold &c | 1,740 380 | Little Queen | 800 |
| Barclay | 1,140 | Prince | 800 | King | 1,760 |
| Vesey | 1,060 | V D Water | 600 | D Peyster | 200 |
| Partition | 1,020 | Tan Yard | 360 | Wall | 1,750 |
| Dyes | 890 | Clift Street | 960 | Garden & flatt enbg | 820 |
| Cortlandt | 790 | Queen Street down to Pearl Street | 5,100 | Bever & Prince* | 920 |
| Crown | 750 | | | Sloat | 400 |
| Little Queen | 700 | Little Dock Do &c down to Water Street | 3,000 | Mill | 500 |
| Thames | 680 | | | Duke | 800 |
| Small street near School-house | 250 | Water | 1,640 | Marketfield | 480 |
| | | Cherry | 1,000 | Stone | 460 |
| So. of Trinity Church | 400 | Batavia | 400 | Bridge | 440 |
| Finchers alley | 300 | Rutgers | 680 | Coenties | 140 |
| So. of Capt. Kennedy's | 360 | Bankers | 630 | on Crugers Wharf | 200 |
| Pearl | 370 | &c | 340 | John | 1,800 |
| Rear of the Battery barracks | 500 | Hage & Skinner | 500 | Fletchers | 480 |
| | | St. James | 750 | Greenwich | 1,650 |
| Church | 1,000 | Rosevelt | 750 | op. M. V. Keuren | 350 |
| Lumbard | 1,050 | near K George | 380 | at Col. Robertson | 380 |
| Great George | 4,800 | Frankfort | 960 | | 15,370 |
| New | 960 | George | 800 | | 27,960 |
| Front Custom House | 570 | Beeckmans | 1600 | | 29,400 |
| Fields | 1,000 | Ann | 760 | | |
| Broad & Nassau | 4,000 | Fair | 1,450 | | |
| K Geo. & Wm | 4,250 | Maiden Lane | 1,900 | feet | 72,730 |
| feet | 29,400 | feet | 27,960 | * Princess | |

The present names of the above mentioned streets which have been renamed since 1774 or which are obscure in the foregoing list are indicated below:

| Name in 1774 | Present Name of Street |
|---|---|
| Bankers (or Bancker) | Madison, from Pearl to James |
| Bever | Beaver, from Whitehall to Broad. |
| Clife (or Clift) | Cliff, from John to Ferry |
| Crown | Liberty |
| Duke | Stone, east of Broad |
| Dyes | Dey |
| Fair | Fulton, from Broadway to Cliff |
| Fields | City Hall Park |
| Fincher's alley | Apparently Exchange alley, formerly Tin Pot alley and Oyster Pasty alley |
| Flattenbergh | Exchange place, from Broadway to Broad |
| Garden | Exchange place, from Broad to William |
| George | Spruce, from Nassau to Gold |
| Great George | Broadway, north of Vesey |
| King | Pine |
| King George | William, from Frankfort to Pearl |
| Little Dock | Water, from Whitehall to Broad |
| Little Queen | Cedar, from Broadway to Greenwich |

| | |
|---|---|
| Lumbard (or Lumber) | Church, from Exchange place to about Liberty |
| Mill | South William, from Broad nearly to William |
| Moravian alley | Dutch |
| Partition | Fulton, west of Broadway |
| Prince | Rose, from Frankfort to Pearl |
| Princess | Beaver, from Broad to William |
| Queens | Cedar, from Broadway to William |
| Robinson | Park place, from Broadway to Church |
| Saint James | James |
| Skinner | Cliff, for about half a block each side of Frankfort |
| Sloat | Beaver, from William to Pearl |
| Vandercliff | Gold, from John to Frankfort |
| College Yard | King's College, bounded approximately by Murray, Church, West Broadway and Barclay |
| Custom House | North side of Battery place, according to Holland's map of 1776 |
| Capt. Kennedy's | No. 1 Broadway |
| Small street near School House | "The City school house," on Montresor's map of 1775, was on the south side of Rector street near Church |
| South of Trinity church | Apparently Rector street |

While waiting for the timber for the pipes, Mr. Colles went ahead dilligently with the construction of his well, reservoir and pumphouse. The reservoir had a capacity of 20,000 hogsheads. The well was 30 feet in diameter. And the engine pumped 200 gallons of water 52 feet high per minute. After the war, Josiah Hornblower was paid £12 for "attending and making report of the fire-engine for the water works about to be erected in 1775." The pump-house was a substantial structure, roofed with pantiles (curved tiles, laid alternately with the convex and concave sides upward) and the bills for iron-work, braziers work, rope, etc., which the city had to pay after the war, indicate that all the works were built in a durable manner.*

But while the water-works were being built, the city was thrown into a turmoil of excitement by the news from Lexington in April, 1775, and Bunker Hill two months later. The work of construction, however, continued into 1776, but with the critical events of that year, the project was completely interrupted, never to be

* By a curious mistake, Col. John Montresor, on his map of the city surveyed in the winter of 1775, has designated the Tea Water Pump on Chatham street as "Fresh water engine from whence the town is supplied."

renewed. Mr. Colles with his family fled from the City and endured great privations, rather than submit to the British rule; and during the period of the war his water-works became totally ruined.

After the war, he returned to New York and soon after the Common Council assembled he presented a petition for the payment of moneys due him. His original memorial, dated October 27, 1784, is in the records room of the City Clerk in the Municipal building. It is a document of peculiar historical interest:

To the Honorable the Mayor, Aldermen and Common Council of the City of New York.

The Humble Memorial of Christopher Colles of said City Engineer Sheweth.

That your Memorialist in the year 1774 presented a proposal to this honorable corporation for erecting works for supplying this city with water for the sum of eighteen thousand pounds.

That this honorable board after sufficient enquiry concerning the practicability of the design Resolved to agree with the said proposal and directed your memoralist to proceed in the execution of the work.

That your memorialist did accordingly proceed in the execution of the work and erected a reservoir capable of containing twenty thousand hogsheads of water; dug, walled, covered and completely finished a well of thirty feet diameter at the inside, from which he pumped by means of a steam engine which he also erected, two hundred gallons of water, fifty-two feet high perpendicular per minute, into the said reservoir.

That previous to the said resolve of the corporation your memorialist furnished them with an estimate of the expense of the different parts of the work, agreeable to which the part executed amounted to the sum of three thousand six hundred pounds.

That the several sums advanced for the prosecution of the work amounted to three thousand pounds, consequently, that there remains a balance of six hundred pounds, one hundred and fifty pounds of which is due to different artificers for work and the remaining four hundred and fifty pounds is due to said Colles.

That your Memorialist in common with other citizens, friends of society and the interest of mankind, suffered the most poignant afflictions during the late war, and with the utmost difficulty procured the common necessaries for his family; and being now returned to the city, where he hopes to devote the remainder of his days in promoting the welfare of the city and country, he prays the corporation to use their endeavors to pay him the balance above

referred to, by which he may be enabled to support his numerous family in credit, and in some degree of comfort.

May it therefore please your honors, to take the premises into consideration, and grant him that justice and assistance, which to your judgment shall seem meet.

CHRISTOPHER COLLES.

The Common Council did not at first act on this petition and on July 20, 1785, Mr. Colles begged the Board again to give him relief, declaring that "his distresses are of such a poignant nature as to compel him to request some (though small) yet present assistance." * In August, 1785, the Council granted him £100 on account.

On November 23, 1785, he appealed to the Council for £50 more on account. This petition gives an interesting indication of Mr. Colles' abilities. He said that he was desirous of applying part of the money " so as to enable him to support his family with credit," and to that end " he has erected a horse-mill and other works for the purpose of carrying on in this City the Manufacture of Fig Blue, which manufacture he proposes to have carried on by his eldest son in case he shall be engaged in the prosecution of the navigation of the Mohawk River." He said that he had already made and sold to grocers and others this product " which upon trial is proved to be fully equal in quality to any imported, although he can afford to sell it at less price."

The foregoing petition was granted and he was given the £50 asked for. Finally, on January 16, 1788, he consented to accept £50 in settlement of all demands.

### Projects of Ogden, Livingston, Rumsey and Others

While the Common Council was still paying bills for the dead enterprise of Mr. Colles, it received successive propositions of a similar nature from other sources.

The first, dated March 24, 1785, came from Samuel Ogden. The original document, which is in the document room of the City Clerk in the Municipal building, reads as follows:

" To the Mayor, Aldermen and Commonalty of the City and County of New York in Common Council.

* Original in records office of city clerk, Municipal building.

The Memorial of Samuel Ogden of said City
Sheweth:

That as the late war hath totally ruined the fire engine and water works which were erected for the purpose of supplying this city with water, your Memorialist begs leave to propose to the consideration of the corporation the following proposals. That he will at the expense of himself and associates erect and establish at or near the place where the former one was built* which shall supply the reservoir with 144,000 gallons of water per day, and that he will in pipes lead and conduct the same water through the streets of this city, in such manner as shall be hereafter explained provided such compensation and reward be secured to your Memorialist and his associates as shall hereafter be agreed upon. On the subject of which your Memorialist begs a conference at such time and place as you may think proper to appoint.

SAML. OGDEN.

New York, March 24, 1785.

This petition came before the Common Council April 5, and Alderman John Broome and William Neilson and Assistant Alderman Daniel Phoenix were appointed a committee to confer with him.

Before any conclusion was reached on this proposition, and on January 30, 1786, Chancellor Robert R. Livingston, who later encouraged Robert Fulton in his steamboat invention and who had a considerable interest in mechanical engineering himself, made a proposition to the Board to contract to convey fresh water to the city. Aldermen John Broome and Jeremiah Wool and Assistant Aldermen William Malcom, George Janeway and Abraham Van Gelder were appointed a committee to confer with him.

On February 6, 1786, both committees made reports, but consideration was postponed, and on February 15, Chancellor Livingston and John Lawrence, who was associated with him in his proposal, appeared before the Board in support of their proposals. On the latter date, the Board decided to return the proposals previously received and to advertise for new ones, to be received prior to January 1, 1787. The latter date was subsequently changed to April 20, 1786.

On April 19, 1786, the day before the date set for opening proposals for the water-works, a strong sentiment was shown at

* The word "works" evidently omitted.

the Common Council meeting against letting out the water-supply to private enterprise. The Clerk reported that he had received three sealed packets containing proposals to erect the water-works; but the Board ordered that they remain unopened until further orders. Meanwhile, the aldermen and assistants were requested "to set on foot in their respective wards representations to this Board in writing and subscribed by the citizens in order more fully to ascertain their sense whether the corporation ought to grant to individuals the privilege of supplying the city with water or whether the same ought to be undertaken by the corporation and that the moneys necessary for the purpose should be raised by a tax on the citizens."

Nothing, however, came of these projects and the matter dragged along almost two years without any further progress or further movement on the part of the citizens. On February 27, 1788, a large number of inhabitants represented to the Common Council "the inconveniencies which arise from the present mode of supplying the city with water" and prayed the Board "to adopt such measures for supplying it with water by means of pipes agreeable to a plan or proposal set on foot by Christopher Colles or such other plan as to the Board shall appear most expedient." But this petition was as ineffectual as its predecessors. The fact was, that the city was passing through a period of reconstruction after the war. The minds of the members of the Common Council and the financial resources of the corporation were engaged to the limit with other municipal improvements — the laying out of streets, the laying of pavements, the building of sewers, the remission or settlement of rents, and the straightening out of the numerous affairs tangled by the interruption caused by the war. It is not surprising therefore that the water-works improvement was held in abeyance.

On January 30, 1789, the Common Council received a letter from Benjamin Wynkoop, Levi Hollingsworth and G. Turner, the Corresponding Committee of the Rumsian society of Philadelphia, stating that Mr. Rumsey had invented an engine superior to any other for supplying towns with water; that he had applied to the Legislature for a patent; and when it was granted, the society would come forward with proposals for supplying New

York with water by contract. The Board received the suggestion with every encouragement, but declared that it had no moneys which it could use for the purpose at that time.

During the next nine years, the subject was taken up fitfully by the city government and by individuals, with no better results. In February, 1792, Zebrina Curtis and others made proposals which were referred to the Street committee and were heard of no more. In March, 1795, Amos Porter made a like proposal. This year, Samuel Crane submitted a specific plan to lead water from the Tea Water Pump through Roosevelt street; and Benjamin Taylor advanced still a different project. In February, 1796, the Common Council directed a committee to advertise for proposals; and in December, Dr. Joseph Brown and associates offered to supply the City with water through pipes. Again in 1797, sealed proposals were advertised for, and seven or eight applications were received. One of them was from Christopher Colles. They were referred to a committee and lost sight of. In 1798, R. J. Roosevelt and Judge Cooper of Otsego made new applications; and so did Dr. Joseph Brown. The latter was so novel at that time that it is entitled to consideration under a separate head.

### Bronx River Suggested in 1798 as Source of Water

The originality of Dr. Joseph Brown's project in 1798 lay in the fact that he proposed to go to the Bronx river for the water, and this was apparently the first suggestion of going off the Island of Manhattan for this purpose. On December 17, 1798, the committee of the Common Council which was appointed to investigate this suggestion reported in its favor, and made three specific recommendations:

First, that William Weston, who had been the engineer for the canal companies in this State and was a man of known abilities, be requested to examine the river, the grounds for the aqueduct, etc., and report his opinion;

Second, that in view of the importance of the matter to the comfort and health of the inhabitants, and the fact that private parties would not undertake the enterprise except with the prospect of gain at the expense of the citizens, the water works should

be under the control of the corporation as the immediate representative of the citizens in general; and

Third, that the Legislature be requested to pass a law giving the City power to undertake the work and to raise the necessary funds by taxation.

Mr. Weston was consulted, as above suggested, and on March 14, 1799, he made a report which is of great civic and historical interest, and also gives an indication of the state of hydraulic science nearly a century and a quarter ago. It is as follows:

"City of New York, ss:

"At a Common Council held on Saturday, the 16th day of March, 1799, the following Report of William Weston, Esq., on the practicability of introducing the water of the River Bronx into this city, made at the request of this Board was read, and ordered to be printed, viz:

"Sir: In compliance with the request contained in your letter of the 18th of December last, I have taken the earliest opportunity which my engagements and the state of the weather would permit, to ascertain the practicability of introducing the water of the Bronx into the City of New York; the result of which investigation I have now the honor of transmitting to you, requesting that you will lay the same before the Common Council, who, as the immediate guardians of the City, must feel peculiarly anxious to possess such information on the subject as may enable them to determine upon the propriety of the measures necessary to be taken to accomplish that important object.

"I am sensible that estimates of the expense attendant on the execution, would have been a desirable piece of information, but a wish to render them as accurate as the uncertainty of the business will admit, induces me to request a further indulgence of time to procure information on several material points, essential to be known, previous to the completion of the necessary calculations, but with which I am at present unacquainted.

"Though the amount of the expense ought, and doubtless will, have a proper degree of influence on the final decision, yet perhaps it is not a disadvantage, in the first instance, that the question should be determined on its abstract merits alone.

"In an object of this nature, the first point to be fixed, is the quantity of water necessary to be delivered in a given time: was nothing more required than a sufficiency for culinary and other domestic uses, the matter might be easily ascertained. But as the principal object of this undertaking is the introduction of a

copious and constant supply for cleansing and cooling the streets, it becomes a question of importance to determine, as near as may be, the amount of the required demand. Several specific quantities have been mentioned, but in my opinion they are all inadequate to the contemplated purpose. In this, as in all other undertakings, I conceive it to be an object of the first consequence to have the effect dependent on the will, and where, from the nature of the thing, no certain conclusions can be obtained, it is wisest to err on the safe side.

"Whatever doubts may be entertained of this deduction as a general principle, I believe there can be none, respecting the propriety of it in the present instance; for, however great the amount of the surplus water may be, there are a variety of useful and productive purposes to which it may be advantageously applied. Proceeding on this ground, I have endeavored to calculate, as near as the want of sufficient data would enable me, the minimum quantity necessary to be introduced in twenty-four hours.

"Though conclusions deduced from hydraulic principles of the expense of water issuing from pipes of given diameters, placed on the summits of the several streets, would have been much preferable to vague guesses; yet the infinite variety of cases, arising from different degrees of depression below, and distance from, the principal reservoir, would have rendered the operation a very laborious one, and, from a variety of causes, the result very uncertain. Indeed, every mode with which I am acquainted, may be objected to on the latter principle; but though it is perhaps impossible to ascertain the exact truth, we must endeavor to approximate as near thereto as possible. Conceiving it to be the intentions of the gentlemen who have recommended the measure of washing the streets, as essential to the health of the citizens, to have a regular and plentiful current of water running at least twelve hours every day, through all the streets, by means of pipes placed at their respective summits, producing an effect similar to what we may observe to be done by a moderate shower of rain of the same duration; calculating, therefore, the area of the city, the quantity of water usually descending in the time above mentioned, and making due allowance for such parts of the general surface as are pervious to water, we shall obtain a result that perhaps on the whole will be as near the truth as can be done by any other mode, and sufficient to answer every purpose required. I find that the area of the city, bounded by the East and North rivers, and the intersection of them by Grand street, is upwards of 750 acres, and, making an allowance of 350 for public squares, gardens, and other unpaved surfaces, we have a remainder of 400 acres, which, being unpenetrable to the rain, all that falls on that surface must be discharged

by means of the channels of the different streets into the adjacent rivers. I have made various inquiries, but have not as yet received any correct information of the quantity of water produced by a moderate shower of twelve hours' continuance; I am, therefore, under the necessity of assuming as a fact, what may hereafter be proved to be erroneous, though I have reason to believe that my calculations will not be found to be overrated.

"Fixing, therefore, the depth, as shown by the rain-gage at one-fourth of an inch, we shall find the total amount to be 363,000 cubic feet, or 2,221,560 ale gallons, and adding to this, 778,440 gallons as an adequate supply for domestic consumption, we shall have three millions of gallons to be introduced into the reservoir every twenty-four hours.

"I beg leave to observe, that an increase or diminution of the above quantity may be effected by one of the plans submitted to your consideration, without materially altering the design or enhancing the estimate, while by the other, the expense will be nearly proportioned to the quantity required. I offer the preceding calculations merely as an essay to determine a point, which as yet has remained undiscussed, though of such importance that I deem it the basis of the whole work. I shall readily yield to any valid reasons that may be produced in support of variations from the above conclusions.

"The quantity requisite being determined, the next point to be ascertained, is from what sources it can be most conveniently derived. I am acquainted with but two modes that deserve any consideration. The first is the introduction of a part or the whole of the waters of the Bronx; the second is a supply obtained from the springs of the Collect. As this question has much agitated the public mind, and each plan in its turn been extolled or decried by their respective advocates and opponents, it has produced (what is too frequently the effect of a collision of sentiments) a more obstinate attachment to preconceived opinions. I do not, therefore, expect that any arguments which I shall produce, will reconcile the jarring interests; yet I trust that the statement I shall offer (and it is the result of some experience and reflection), will enable those whose province it is to judge of the merits and disadvantages of the different plans, to select that which, on the whole, shall be most conducive to the public welfare.

"In order to form a correct opinion on the subject, it is necessary to take into consideration the efficiency of supply — the quality of the water, as it respects the different uses to which it is to be applied, and the expense of execution.

"On the first of these heads, I am aware that it has generally been believed, and pretty confidently maintained, that at those

seasons when the demand will be greatest and most essential, that the waters of the Bronx are wholly inadequate; these assertions have been made with a degree of positiveness that would induce one to believe they were founded on the most careful and accurate experiments, which I have every reason to imagine have as yet never been made, instead of which, I have no doubt they are the random guesses of superficial observation. The question is of such importance, that we ought to be very careful that we proceed upon the most certain ground. In a matter of this consequence, I may be allowed to be a little diffuse.

"It is evident that at the period when the greatest supply of water is wanted, there will, from natural causes, be the least quantity furnished; this is a common principle, applicable to all rivers and springs; the very few examples to the contrary, are mere exceptions to the general rule. This circumstance has created doubts in the minds of many persons of the efficiency of the Bronx. Previous to my examination of that stream, I had regretted that proper experiments had not been made at the season above alluded to, as then the fact would have been ascertained beyond all dispute. It is universally allowed that, for the greatest part of the year, there is a superabundant quantity; what the diminution may be, is not now easily ascertained; we must rely altogether upon the information of those persons whom a long residence has afforded the best opportunities of judging of its usual decrease; but, as not materially interested on the subject, we cannot expect any considerable degree of accuracy in their observations. Allowing for this circumstance, I have been careful to take the lowest average of the results of three distinct cases, founded on the best data I could procure, and applying to them well-known hydraulic laws, I am persuaded that the natural stream of the Bronx alone, if conveyed without waste, would be fully adequate to the supply before mentioned; but, fortunately, a minute accuracy is not required, as will appear by the following account of the River Bronx, whose principal source is from a lake, about four miles to the northward of the White Plains, known by the name of Rye Pond. This is a beautiful sheet of water, upwards of a mile in length, containing, as appears from an old survey, upwards of 500 acres of water, which, flowing from the outlet, is received into another pond, a short distance below, whose area exceeds fifty acres. From this pond it descends, with a rapid current, upwards of a mile to Mr. Robins' mill; a few rods below which, it unites with the other branch of the Bronx. This last, which has its origin in a swamp a few miles to the northward, retains the name of the Bronx to its source; yet it is the least considerable stream, particularly in the summer, when it is reduced

to a small current; while the other branch is sufficiently large to turn an overshot wheel twelve hours out of twenty-four, in the driest times. Rye Pond is bounded by high and bold shores, which, tending towards each other at the outlet, are admirably calculated for the formation of an immense reservoir. This being filled during the winter and spring, may be retained until the month of July, when the natural supplies begin to diminish; it may then be discharged periodically, so as to afford any given quantity of water that may be requisite for the use of the City. This lake is supplied wholly by springs, many of which are internal, and few of the others originate more than a mile from the head. These are so constant and copious, that no doubt can arise of their capacity to fill the reservoir to the contemplated height of six feet, which may easily be effected by throwing a dam across the outlet of the lower pond. This would form a sheet of water of more than 600 acres in extent, containing 959,713,920 gallons of water; affording (independent of the natural stream of the Bronx), a diurnal supply of nearly eight millions of gallons for 120 days, three-eighths of which quantity is sufficient for our purpose. The surplus five millions, may be given to the mills below the point of partition; so that, instead of injuring (and consequently recompensing them for the damages) the mills on the Bronx, as has been generally apprehended, they will derive essential benefits from the measure.

"Having, I flatter myself, removed the doubts of the most incredulous, respecting the efficiency of the supply to be derived from the Bronx; it remains to examine the competency of the waters of the Collect. The general bias of opinion seems to lean in favor of this scheme; and if it can be made satisfactorily to appear that the required supply can be obtained from this source, I am ready to allow that it is a work that would be soonest accomplished, and attended with the least expense. But we ought to be extremely cautious in hazarding an experiment where the cost would be so great, and the event so doubtful. The question is of infinite importance, and, unfortunately, one that cannot be determined by abstract reasoning. The capacity of the Collect has been attempted to be proved by its present extent; but that, in my mind, is a most fallacious mode of reasoning; for, however great that may be, a powerful steam engine would soon exhaust it, unless replenished with numerous and copious springs. On these alone, therefore, it is evident we must depend, and I know of no other mode of estimating their combined effect than by calculating the quantity of water issuing from the outlet of the Collect, which, even at this time, is so inconsiderable as scarce to deserve attention, and, if my information is correct, it ceases to flow altogether

in the summer. I am sensible that we should not too hastily conclude that the above is the total amount of the supply that may be derived from this source. I think it very probable that, from the nature of the surrounding ground, which is a coarse and porous gravel, a considerable portion thereof may percolate through, into the adjacent rivers. Much, and perhaps the greatest quantity, is also daily drawn off by the Teawater Pump, which, from its vicinity, I have no doubt, is supplied from the same source. It is true, that by sinking deeper into the earth, an augmentation of quantity would be procured; yet, if we went lower than the surface of the tide-water, I apprehend that the quality would be materially injured.

"Leaving the question, as I fear it will remain, undetermined, we next proceed to examine the quality of the respective waters. To appreciate their merits fairly, we should judge of their utility by the extent of their application. Proceeding on this ground, I believe it may be safely affirmed that the water of the Bronx is at least equal to that of the Collect, though this is contrary to the general opinion; the only reason that I can perceive for the preference usually given to the last mentioned, arises solely from its superior coolness; however grateful this may be to our feelings, it does not follow that it is equally conducive to our health; for whatever degree of purity it may now possess, the period is not very remote when, from the natural increase of the City, these springs must be subject to those contaminations which have already rendered so many wells unfit for use; an evil that is daily increasing, and to which no effectual remedy can be applied. This, to me, has ever appeared an insurmountable objection. The idea of supplying a large city with pure water from a reservoir in its centre, has always been a very strange one to me. From the representations made respecting the water of the Bronx, I believe many persons have hastily concluded that it was unfit for use. When it is considered that the principal cities in Europe are necessarily supplied from rivers, and with water generally taken from those parts which, from a variety of causes, are most impure, and yet that the experience of ages has not evinced any known ill effects arising from the practice, I conceive that little fears will be entertained of the salubrity of the water of the Bronx, which is a collection of innumerable springs, issuing from a rocky and gravelly country, and running, with a rapid current, over a bed of the same materials. It will be conveyed into the City without any additional impurity, and, ere it is distributed from the reservoir, will, by a mode of purification hereafter described, be rendered as clear as spring water.

"The next object to be ascertained is the practicability and probable expense of accomplishing the respective plans. And here it may not be amiss to observe that in a matter of such immense consequence to the present and future convenience and welfare of the City, every local view, every subordinate consideration, should yield to the general good — that a regard to the primary object alone should decide the question, regardless of a paltry difference of expense, or the immediate emolument to be derived from the undertaking. On the first of the above-mentioned heads there have been a diversity of opinions, which previous to an actual survey, was not to be wondered at. These doubts must now be removed, as it appears from the examination that has been recently made, that the Bronx is sufficiently elevated above the highest parts of the City to introduce its waters therein without the aid of machinery; and the intermediate ground, though very irregular, presents no obstacles which art and industry may not surmount. A general view of the subject is all that I am now able to present, and all that is necessary to be known, in this stage of the business. An outline of the plan I would recommend for adoption, as best adapted to the varying face of the country, will be sufficient to enable you to form a tolerably correct idea of the eligibility of the measure. The best situation I have yet seen to draw the water from the Bronx, is a short distance above Mr. Lorillard's snuff-mill.* A break in the western bank enables us to divert the stream, by means of a dam thrown across it, without any difficulty. The water being raised six feet above its natural level, will flow over a small swamp, from which originates the little rivulet called Mill brook; following the direction of this stream, a canal may be drawn along its northern bank at a small expense, for the distance of three miles, when the ground falling off rapidly, renders it necessary to cross the valley in which Mill brook runs, by means of an aqueduct, to the opposite rising ground, along which the level may be preserved to the heights above Harlem river. An open, walled canal, will be the cheapest mode of conveying the water so far: a little loss is not material, as a small increase in the section will remedy such waste. A declivity of six inches in a mile, with a section of 1152, and linear border of 89 6/10th inches, will occasion a velocity in the current sufficient to introduce into the small reservoir at the extremity of the canal 6 cubic feet of water per second, which is more than the quantity required, supposing the daily supply to be three millions of gallons. The most difficult and expensive part of the route will be the conveyance of the water across Harlem river. The most

* Site now in Bronx Park, 1917.

eligible mode of effecting this, appears to me to be by means of cast iron cylinders, of two feet diameter, with a difference of 8 feet between the extremities. This descent will produce a velocity of 22¾ inches per second, yielding, in that time, 5 95/100ths cubic feet, while the required quantity is only 5 65/100ths. From the cylinder to the reservoir it is a matter of consequence to preserve as much of the water as possible; to effect this object, the bottom and sides should be rendered impervious to that element. An absolute necessity to preserve a regular and uniform descent, leaves us little room in the choice of our route, which will be chiefly along the shore of the North river. The quality and make of the ground vary much. The greatest impediments are occasioned by the numerous ravines which intersect the line of the canal. Over all these, aqueducts must be constructed. The level may thus be preserved upwards of six miles, or within two miles of the City; there it descends so much, that unless higher ground can be found, it will again be necessary to have recourse to iron cylinders to convey the water into the Grand Reservoir, which may either be placed in the Park,* or a vacant piece of ground to the northward of the Hospital, either of which are sufficiently elevated to distribute the water through all parts of the City. The total distance from the Bronx to the Park is 14 miles, 7 furlongs, and the descent twenty-three feet. It is to be observed that the principal object of this survey being to ascertain the practicability of the plan, and neither my time nor the season permitting that minute investigation which is necessary to be made, previous to the commencement of any operations, there is a probability that advantageous deviations may be made from the route pursued.

"Although the form and dimensions of the reservoir are objects of importance, it is now premature to point the particular mode of construction I would recommend to be adopted. Yet it may not be improper to give a general outline thereof, as perhaps it may tend to remove many of the prejudices which have been entertained against the supposed impurities of the waters of the Bronx. It is proposed to divide the reservoir into three parts, two of which will again be subdivided, each of these minor divisions capable of containing a daily supply of water. The first division, or reservoir of reception will contain the water as immediately delivered by the cylinder of discharge. While one of its subdivisions is filling, the other, in a quiescent state, will be depositing the adventitious matter, with which the water may be intermixed. After so remaining twenty-four hours, it will be drawn off by an aperture near the bottom (so as to prevent any buoyant particles from

* Present City Hall Park.

entering), into the reservoir of filtration, where it will still further purify itself, by gradually depositing the remaining sediment, until it is finally received into the reservoir of distribution, after percolating through a bank of washed sand and gravel, in imitation of that natural process to which all water owes its purification. This last reservoir it is proposed to arch over, so as to preserve the water pure and cool; from hence it will be distributed, in separate and distinct pipes, through every part of the City.

"The water destined to cleanse and cool the streets may be taken immediately from the reservoir of reception, as I conceive it is not necessary that it should be very pure.

" The surplus water, which for a considerable part of the year will not be wanted for washing the streets, may be applied to a variety of purposes, but perhaps to none more useful or advantageous than the supplying of dry-docks, which may be constructed to receive the largest ships.

" If the water in the Collect is deemed adequate to all purposes of domestic consumption, it must be raised, by means of a steam engine, into a reservoir. The situation before mentioned will, in this case, be very convenient. Although one engine, might be constructed so as to raise both the water for washing the City and for family use, yet, as from the quantity necessary to be raised, it would be unwieldy in its parts, and more liable to accident, and, also, as two-thirds of its power would be useless the greatest part of the year, I believe it will be most advisable to erect two. The first, destined to raise the water for cleansing the streets, placed at the foot of the hill to the northward of the Hospital, which would be supplied with water from a reservoir made in the adjacent low ground. This would be replenished twice in twenty-four hours by the tide, by means of an open canal, or culvert, communicating with the reservoir. The small engine might be placed near the other, the pump well being supplied with water from the Collect, conveyed in a culvert or pipes. The following calculations of the dimensions of the largest engine will be found sufficiently correct to enable you to form a tolerable idea of the annual expense attendant on it. Admitting the quantity (as before calculated) to be sufficient, we find that 2,200,000 gallons, or 359,640 cubic feet, must be daily raised. Supposing the engine to work sixteen hours out of twenty-four, we have 22,477 feet to be raised every hour, or nearly 375 every minute; estimating ten strokes to be made in a minute, each stroke must yield 37½ feet; but as pumps generally fail in producing the calculated quantity, say 40 feet per stroke; and if the lengths of the strokes are 8 feet, it will require a pump of 30 27/100ths inches diameter. But a pump of that dimension would not answer in practice; it

will be necessary, therefore, to diminish the diameter, and increase the number of pumps; six of 12 3/10ths inches will be equal in area to that before mentioned. As the water would be raised about 50 feet, the weight of the column would be 15.613 lbs., which would require a cylinder of 44 2/10ths inches diameter (allowing the active power of Mess. Bolton & Watt's engines to be 8 lbs. on every circular inch). Such an engine would consume about 330 lbs. of coal per hour.

"Having thus given you every information necessary to be known for your guidance, I shall conclude by remarking that my objections to the Collect — being founded on the doubts I entertain of its efficiency to supply the annually increasing demand of this improving city, and to the contamination its waters will be subject to — will be done away altogether, when it shall be made to appear that they are groundless. In such a case, there can be no question which plan is most eligible, as it respects the time and expense of execution.

I am, sir,
With respect,
Your ob't serv't
Wm. Weston

The Hon'ble Richard Varick.

New York, March 14th, 1799.

Printed by order of the Common Council.

Robt. Benson,
Clerk.

### The Manhattan Company's Water-Works, 1799

The first successful pipe-line system of water-works was that of the Manhattan company, which was incorporated in 1799. Upon the assembling of the Legislature that year, Aaron Burr and several other men applied for a charter for the purpose of "supplying the City of New York with pure and wholesome water," and on April 2, 1799, the bill was passed, incorporating the Manhattan company. The capital of the corporation was $2,000,000 — a great sum for those days — and as the cost of the proposed water system could not accurately be foreseen, there was a clause in the charter permitting the company to employ its surplus capital in financial transactions not inconsistent with the constitutions and laws of the State of New York and the United States.

It has been a common tradition that the banking privilege contained in this charter, apparently as a subordinate feature, was really the main object of the projectors, and was thus introduced covertly to avoid the opposition which Burr was certain to encounter from Alexander Hamilton and the Federal party. Hamilton had organized the first banking organization in New York when in 1784 he formed the Bank of New York which was chartered in 1792. For fifteen years, Hamilton's bank and the Branch bank of the United States were the only banks doing business in the City of New York. This monopoly was of value to the political party which was then in control and with which Hamilton was allied, and consequently Burr's effort to obtain a charter, which was quickly perceived to contain a clause which permitted banking, was earnestly opposed. The opposition was unsuccessful, however, and the Manhattan company secured its charter.

Whether the tradition before mentioned as to the leading motives of Burr and associates was well founded or not, the fact remains that the company did go ahead with the water-works undertaking, built reservoirs, and laid an extensive system of distributing pipes in the then small city. These pipes were hollow logs, many of which have been dug up in recent years in the streets south of Chambers street. The first meeting of the directors was held at the house of Edward Barden, inn-keeper,* on April 11, 1799, when there were present Aaron Burr, John Broome, who was long an Alderman, John B. Church, who fought a duel with Burr on September 2, 1799, John B. Coles, Richard Harrison, who was Recorder of the city, William Laight, Brockholst Livingston, Daniel Ludlow, Samuel Osgood, Pascal N. Smith, John Stevens and John Watts. The only absentee was William Edgar. Mr. Ludlow was elected President.

At the meeting of April 11, 1799, a resolution was adopted declaring that the principal object of the corporation was to obtain a supply of pure and wholesome water for the city and a committee was appointed to report means for obtaining such a supply. So rapidly did the plans mature that on May 6 following the water committee was empowered "to contract for as many

* The Merchants Coffee House.

pine logs as they may think necessary for pipes and also for boring the same."

Meanwhile, if the water supply was the chief object of the company, the banking privilege was not neglected, and on April 17, 1799, a committee was appointed "to consider the most proper means of employing the capital of the company." On June 3 the committee reported in favor of opening an office of discount and deposit and a house was bought on the site of the present No. 40 Wall street (then having a different number) in which, on September 1, 1799, the bank of the company began business. This venerable corporation is still doing business at No. 40 Wall street under the style of the Bank of the Manhattan Company.

In prosecuting the water-works business, the company sank a number of wells, built tanks and reservoirs, and extended its distributing system generally throughout the city below Chambers street. In 1836 the system was extended northward along Broadway as far as Bleecker street, when the company had about 25 miles of mains and supplied about 2,000 houses. The maximum amount of water supplied by this company was about 700,000 gallons a day. The company continued to operate its system until about the time the Croton system came into use in 1842.

One conspicuous landmark of the old water-works was the Chambers street reservoir. It had sloping walls, similar in style to the Croton reservoir which later stood on the site of the present Public Library on the west side of Fifth avenue between 40th and 42d streets. It stood on the north side of Chambers street between Broadway and Center street. Its facade was unrelieved except by an entablature which was supported by four Doric columns and upon which was a figure of "Oceanus, one of the sea-gods, sitting in a reclining posture on a rising ground pouring water from an urn which forms a river and terminates in a corporation seal of the company adopted May 8, 1799. (See plate 8.)

Another landmark of the company was the tank which stood on the northwest corner of Reade and Center streets until July, 1914, when it was demolished. At the time of its removal, the tank was photographed and measured by the present writer. This tank,

which was erected over one of the earliest wells of the company, was circular in form and measured 41 feet in diameter. It consisted of a massive stone foundation rising 23 feet above the original ground level, and was surmounted by a circular tank, 41 feet in diameter and 15 feet high, the sides and bottom of which were composed of iron plates bolted together. Later the reservoir was enclosed in a building consisting of three stories and cellar which was owned by the company. We will describe the reservoir with reference to the stories of this building.

The stone foundation of the reservoir consisted mainly of a circular central column of a solid masonry 10 feet in diameter, and a circular outer wall 4 feet thick. The inner space, 11½ feet wide between the central pier and the outer wall, was divided into eight symmetrical segments by radial partition walls, 3 feet thick, perforated next to the central pier by arched passage ways 4 feet 6 inches wide and about 17 feet high. On the ground level (in the cellar of the surrounding building) the outer wall of the foundation of the reservoir was penetrated by four arched doorways, about 3½ feet wide and 6 feet high, equidistant, and located adjacent to the alternate radial partitions.

The lowest 10 feet of the foundation was in the cellar of the surrounding building, the first floor at the modern street level being 10 feet above the old cellar ground level. The next 10 feet of the foundation was included in the first story of the surrounding building. At the first floor level was one doorway 3½ feet wide, 6 feet high, with flat lintel, apparently not contemplated in the original plan. The wooden flooring had been extended into the interior of the foundation and was used, as was the space below, for storage purposes. Each of the other seven sections of the circular wall above this floor level was pierced by a circular opening about 2 feet in diameter and lined with brick. These circular openings were about 5 feet above the floor or 15 feet from the ground. The archways in the interior partition walls were 7 feet above the floor or 17 feet from the ground.

Above these archways there was about 6 feet of solid masonry from center to circumference. Upon this was a thin layer of sand, to equalize the superincumbent weight, and upon the sand were laid the bottom plates of the reservoir.

The upper 3 feet of the foundation and the lower 7 feet of the iron tank appeared in the second story of the surrounding building.

The upper 8 feet of the tank appeared in the third story, there being just room enough between the top of the tank and the roof timbers of the building to permit a person to look into the tank.

The bottom of the tank consisted of flat rhomboidal segments of iron plates, bolted together at their flanges. (See illustrations in our 1915 Report.) The cylindrical side consisted of three tiers of rectangular iron plates, 5 feet high, 2 feet 4 inches wide, slightly curved, and similarly bolted together by their raised flanges. At the flanges the plates were 3 inches thick. The design of each plate was divided into 2 panels. In the illustration in our 1915 Report two rectangles, one above the other, represent one iron plate. A projecting hook in the center of each plate indicated that each tier of plates was reinforced by a circular band of iron.

When the tank was taken down in July, 1914, the black sediment on the bottom of the reservoir — the accumulation of dust which had slowly settled in the tank notwithstanding it was surrounded and covered by the building — was about 1 foot thick.

Connected with the tank were certain inflow and outflow pipes of no particular interest. Water was originally pumped into the reservoir by means of a steam engine.

Among the traditions which grew up around the old reservoir was one to the effect that the Manhattan Company was obliged to pump water into the tank every day in order to keep alive its charter. As the reservoir is now gone and the company continues to do business, the tradition appears to be effectually set at rest.

During its later history, while this tank was enclosed in the three-story building its existence was known only to antiquarians and a few others. When the building and tank were torn down in 1914 to make room for a modern building, the old reservoir was exposed to view and excited the liveliest public interest. All sorts of strange tales were circulated about it. One story alleged that it had been a fort in the War of the Revolution and another that it had been an ancient prison, neither of which legends was true.

The wooden pipes of the old Manhattan Company are frequently met with in excavating for modern water-mains, gas-mains, sewers,

electric conduits and subways; and sections of them are preserved at the New York Historical building and elsewhere as great curiosities. One of the latest sections to be exhumed to the knowledge of the present writer was dug up at Pearl street and Coenties Slip in June, 1917, and is in the writer's possession.

### Robert Macomb's Bronx River Project, 1819

The operations of the Manhattan Company were a source of considerable aggravation to the city fathers on account of the tearing up of the streets and pavements by the water company; and in the early part of 1804, during the mayoralty of DeWitt Clinton, the Common Council and the Manhattan Company had to appoint conference committees to adjust the claims of the city against the company. These troubles, together with the manifest desirability of having a municipal water-supply, led to the appointment of a committee by the Common Council to consider the subject. The Common Council minutes of August 27, 1804, contained the following:

"The Committee appointed to examine and report the best plan for supplying this City with pure and wholesome water having reported upon the subject. Resolved, that a Committee be appointed further to investigate the practicability of supplying this City with pure and wholesome water, and that they enquire into and report to this board the quantity of water which can be supplied from the sources mentioned in the report made by the Committee recently appointed on this subject, the mode they would judge the most suitable for that purpose, and the expence likely to attend the same. And for this purpose that they likewise have authority to confer with the Directors of the Manhattan Company as to their terms for ceding to the Corporation the works established by them for supplying the City with water, and with any other persons whatever whom they may judge it expedient to make terms with upon this subject, and that they make report as soon as convenient to this board."

The committee appointed pursuant to the foregoing resolution consisted of Aldermen Wynant Van Zandt, Jr., Jacob Morton and George Janeway; Assistant Aldermen Clarkson Crolius and Caleb S. Riggs; the Inspector and Street Commissioner, but nothing appears to have resulted from their labors.

In March, 1816, a committee was appointed to consider and report upon the propriety of making an application to the Legis-

lature, to invest the Mayor, Aldermen and Commonalty with all necessary powers to supply the City with water. The minutes contain no report from this committee.

In 1819, Robert Macomb, who had recently built a dam across the Harlem river near 155th street, presented a memorial for permission to supply the City with water (collected at a reservoir at Harlem River), for all domestic purposes. The scheme of Mr. Macomb and associates was to bring the water from the Bronx river and Rye pond, and they professed their ability to complete the work in two years, without any aid or compensation from the Common Council, asking only the privilege of laying down the pipes and selling the water. For the consideration of this subject, they asked the appointment of a committee, and one was appointed to confer with them. By the courtesy of Mr. Macomb G. Foster of New York City, we have been enabled to copy Robert Macomb's original memorial, which reads as follows:

"To the mayor, aldermen, and commonalty of the city of Newyork,

"The undersigned has the honor to submit to the consideration of the mayor, aldermen, and commonalty, of the city of Newyork, the following

PROJECT

for supplying the city of Newyork, with water.

"In the city of Newyork, the emporium of America, the singular fact is witnessed, of a great metropolis, unprovided with water, abundantly, for its private and public exigencies. That water is an indispensable ingredient in the aliment of man, is a truth, which it was superfluous to establish: and if it be necessary to man considered individually, how much more so must it be to the dense population of cities, for the ordinary purposes of life, not only, but for preserving the general health? Indeed so important has been considered the supplying of cities with water, in every period of civilization, that the subject appears to have got interwoven with the policy of enlightened Statesmen, in all countries. Among the romans, an abundant supply of water, was deemed inseparable from the prosperity of their cities. And accordingly we find, their most distinguished rulers, constructing with incredible labor, vast aqueducts, which transported distant rivers, and dispensed comfort, health and vigor, by supplying, copiously, the public fountains and baths, and by cleansing the *cloaca,* or common sewers. These aqueducts, fountains, baths, and sewers, are the proudest remains of roman policy; for they show that the public comfort and health were deemed subjects of

the deepest solicitude, and worthy of the greatest expense and labor. So great, indeed, were this expense and labor, that the city of Rome, was completely excavated, by vaulted sewers: and the aqueducts were supported by prodigious arcades, constructed in ranges one above the other. In contemplating these structures, the great Pliny was heard to remark, 'that Rome was built in the air.' And the immense masses which still mark the remains of the Claudian, the Julian, the Marcian, the Neronian aqueducts, may serve to inspire, truly, that sentiment.

"It were superfluous to particularize the cities and places, furnished with water. It is sufficient to remark that there is no town or city, of any importance, at home or abroad, which is destitute of an ample supply of good water: while the city of Newyork, justly distinguished for an enlarged and munificent policy, is unprovided with water, of a good quality, for domestic purposes; and wholly unprovided with water for public purposes, such as irrigating the streets, cleansing the sewers and market-places, and extinguishing fires. And what must strike the reflecting mind, with peculiar force, is the fact, that while Newyork, is the great seat of commerce; while our ships, range like a forest, along our wharves, not one of these ships can procure from this city, a supply of water fit to take to sea. Aware of these facts, the corporation of the city, have long meditated on the means of getting a copious supply of good water. And accordingly they have employed, at different periods, men of science, to devise the best means of attaining this object. Various plans have been proposed, all of which have failed either on account of enormous expense or of total inefficiency. Among the projects which seem to have attracted the attention of the Common-Council, was that proposed by William Weston Esquire, an ingenious and scientific gentleman, who designed to bring Bronx-river, into the city of Newyork, by means of an open aqueduct of masonry. But when, in estimating the expense, it became necessary to take the profile of Westchester County, and of Newyork-island, the mind was overcome, in contemplating the profound vallies, and the stupendous hills, which the line of the aqueduct would have to pass, in preserving the level of the Bronx. Others proposed to furnish the city, from Saw-mill river, in Westchester County; but doubts were entertained of the sufficiency of the supply.

"At the period of which we are speaking, The Manhattan Company, rose into existence, endowed with plenary powers, to effect the great purpose of supplying the city of Newyork, with pure and wholesome water. Unwilling to adventure a greater expenditure than was absolutely necessary for the enjoyment of their charter, they did not hesitate to abandon the project of the

stone aqueduct from the Bronx; and the alleged insufficiency of supply, afforded a ready pretext for not disturbing Saw-mill river. So that after all the research, and all the discussion, as to the best means of supplying the city abundantly with good and wholesome water, we behold The Manhattan Company resorting to the singular expedient of furnishing water to a large metropolis, from wells dug in the center of it. Yes, this great city, comprizing 130,000 souls, still, calmly, witnesses this anomaly; although, while panting under a torrid sun, with all the apprehension of approaching pestilence, it has not the means, by a course of copious irrigation, of stripping disease of its aliment. Besides, there is something repugnant, in the very idea of drawing water, from the soil of a great city, made up, as it is, of feculency; for it is a fact geometrically true, that the privies alone, with the earth immediately contaminated by them, exclusively of every other source of putrescence, comprize one-twelfth part of the inhabited plot of the city.

"The undersigned having long seen the great necessity of a copious supply of good water, after a very attentive examination, found that Rye-pond (a beautiful lake hereafter mentioned, lying in Westchester county) as connected with Bronx-river, was the only source, from which this city could be supplied effectually, and cheaply. For he found that the water of Rye-pond and of the Bronx, could be brought as far as Harlem river, within eight miles of the city, through a natural water-channel, without much artificial means. Having brought those waters to that point, he reflected on the best means of transporting them across Harlem-river, and of getting them into the city. And accordingly he found that a permanent stone-dam thrown across that river, would answer the purpose of an aqueduct bridge, and would furnish a prodigious water-power also applicable to the raising of the necessary quantity of fresh water by means of forcing pumps, to any required elevation, for conveying them into the city. With a view of effecting this object, (with others, which it were irrelevant to mention) the undersigned applied to the legislature, for authority to build a dam across Harlem-river: and having obtained the requisite authority, he set about the erection of that work; which after three years, of great labor and expenditure, he completed.

"It now remains to be shown, in what way the stone dam erected across Harlem-river, becomes the great instrument, for furnishing the city of Newyork with water.

"Casting the eye over the environs of Newyork two sources for the supply of water, are discovered; one, Saw-mill river, which discharges itself into the Hudson, at Philipsburgh 18 miles from this city; the other, the Bronx, which empties into the Sound, in

the town of Westchester. The first of these sources is wholly insufficient, being generally dry in the summer months; and there are no tributary streams which can be used as feeders. If, however, it shall be required hereafter to bring that stream into the city, that object can be easily effected, by diverting the river through a deep valley, which commences a short distance east of Philipsburgh, and extends to Kingsbridge, and thence to the dam already alluded to; where it may mingle with the waters of the Bronx and be elevated, as hereinbefore proposed. Or, by passing up the Saw-mill river about 13 miles, we come to a point where it may be united with the Bronx.

"The only source from which the city can ever be supplied cheaply and effectually, with good water, is Bronx river, as connected with Rye-pond. This stream rises in North Castle, in the county of Westchester. It draws its supply, principally from Rye-pond, a beautiful lake (unworthily called a pond) lying about three miles north east of Whiteplains. According to the information derived from a very respectable gentleman of the society of friends, John Cromwell, who has long resided on the margin of the lake, and who has seen it measured on the ice: and according to the testimony of other residents of that vicinity, Rye-pond is a little more than a mile wide, and about a mile and a half long. It is of an oblong form, hemmed in by bold and precipitous mountains, which approximate, at the western extremity, so as to leave a narrow space, through which the water exchanges, into a smaller lake, called Little-Rye-Pond; whence it flows in a westerly direction into Bronx river. These mountains form a deep cavern or basin, in which are collected innumerable, internal, perennial springs. The base of this cavern is deeply concave; rising up at the place of discharge, very near the surface of the lake. The greatest depth of the water is 15 fathoms; the average depth 8 fathoms. The water is perfectly pellucid; equalling in purity and limpidness any of the northern or western lakes. It will appear, from this description, that Rye-pond is admirably calculated for a vast reservoir of water. And, indeed, it would seem, as if a beneficent Providence, in contemplating the destinies of our great metropolis, had ordered this vast body of water as indispensable to its prosperity, and had so located it, as to preserve, at once, the purity of the element, and its accessibility.

"The Bronx, for ten months in the year, is a bold and rapid river, capable, after furnishing all the mills established on it, of supplying this city, abundantly, with water, for every private and public purpose. In every year, for about two months, it feels the drought. And it is proposed, in order to guard against any possible deficiency, to construct across the mouth of Rye-pond, a dam,

four feet high, and to sink, the aperture of discharge two feet deep. In this way, a body of water, will be kept in reserve, whose surface will equal to the expanse of the lake, and whose depth will be six feet. Estimating the superficies of the lake, at a mile square, only, the body of water will contain 1254.528000 gallons; and setting down the daily consumption of the city, at 6,000,000 gallons, or 60,000 hogsheads of 100 gallons, each (or one common hogshead of 63 gallons, to every inhabitant, nearly) it will supply that quantity, 209 days, or about 7 months. This quantity 1254.528000 gallons, is to be considered, as a reserve, to be drawn off, at pleasure, by means of a graduated gate, and is entirely independent of the diurnal discharge of the lake. This diurnal discharge, is found, by actual experiment to be as follows. On the 5th September 1819, the outlet of Ryepond was guaged, by the undersigned, in the presence of a committee of the corporation (this project having then been submitted to that body) consisting of Cadwallader D. Colden Esquire, mayor of the city; Gen. Swift, late commandant of the U. S. corps of Engineers; Dr. Samuel L. Mitchell, and other gentlemen; when the result was as follows. The average depth, 9 inches; the average width 5¼ feet; the velocity 37 feet in 25 seconds; yielding 1089 gallons in 25 seconds, or 2616 gallons per minute; equal to 3.767040 gallons, per day. This quantity may be considered, as the minimum daily discharge of the lake, as the experiment was made during a period of excessive drought which had endured nearly four months, whereby the surface of the water, had been reduced four feet below its ordinary level. From these data, we may form an accurate calculation of the sufficiency of the Bronx and of Rye-pond, for the purposes proposed.

"Assuming as a datum that the ordinary level of Rye-pond is four feet higher than it was on the 5th instant, or that it may be maintained at that point we ascertain the common diurnal discharge to be as follows. According to the experiments of the ingenious Mariotts, and of Dr. Desaguliers, it is found that water flows under a head of four feet, with a velocity of 16.2 feet per second. Taking then the dimensions of the column of water, as above laid down, that is to say, the depth of 9 inches, the width of 5¼ feet; the velocity 16.2 feet, per second (although it might be evident, that the depth, width and velocity would be greater, under the increased head) the quantity will be 28560 gallons, per minute, or 41.126400 gallons per day. And allowing 6,000,000 gallons per day, for the consumption of the city, for public and private purposes, we have a daily surplus of 35.126400 gallons which after supplying the mills on the Bronx, wastes itself in the sound.

"This statement will show, that, in ordinary times, Rye-pond, alone, will furnish to the city, and to all the mills on the Bronx, a superabundance of water; and that if a drought should come, there will be held, in reserve, a body of water, which will supply 6,000,000 gallons per day, for seven months; or 14.000.000 gallons, daily, for three months. So that after drawing off, daily, 6,000,000 gallons, for the use of the city, there will remain a surplus of 8,000,000 gallons, to be appropriated, daily, during the dry season, to the mills; which quantity is independent of the minimum daily discharge of 3.767040 gallons: making together a gross sum of 11.767040 gallons, which may be given, daily, to the mills, at the period, when they most need water.

"This illustration shows, most conclusively, without going into any farther details, that the Bronx-river, as connected with Rye-pond, is capable of furnishing water to this city, in the most ample manner, for all private and public purposes, whatever: And that under the simple devise of encreasing the capacity of Rye-pond, (the grand reservoir) as herein proposed, there will be an immense surplus of water which may be devoted to the melioration of the mill-seats, on the Bronx, at all times, but in a most especial manner, in the season of drought.*

"Having shown that the waters of the Bronx and of Rye-pond, are abundant, it may be well, before we proceed to indicate the means of bringing them into the city, to show that they are of a good quality. The test of a good water, for potable and domestic purposes, is that it is free from taste; that it is soft to the touch; that it mixes freely with soap and other alkalis; and that pulse, and legumenous vegetables, boil quickly in it, and retain their verdure. A good test, also, is, that the water, will not soil bright copper, when dropped on it. These are evidences, that the water is free from earthy and metalic impregnation. But, as T. Vitruvius says, there is no evidence so infallible of the goodness of water, as the uniform health of those who are in the habit of drinking it, and their freedom from cutaneous, and peculiar local complaints. And Belidor, adopts the same test.† Nothing can illustrate, more fully, the truth of this remark of Vitruvius, than the effect produced by the waters of the Alps, in some of the provinces of Saxony and France, in begetting the hideous complaint called *goitres;* which being a complaint entirely local, evi-

* While on the subject of quantity, it may be well to remark, that Byram-pond, a considerable lake, may be united with Rye-pond at a trifling expense.

† La meilleure manière de connaitre la bonne qualité de l'eau, est de voir si les personnes qui en boivent ordinairement, sont robustes, de bonne couleur, exemptes de fluxions sur les yeux, et de maux de jambes.

Archit: hydraul: 2.346.

dences a local cause: and the predominance of the gravel, and the stone, in particular places, is a clear demonstration of the effect of bad water, on the constitution. Taking then the test as laid down by Vitruvius, it may be truly said that no people are blessed with a greater share of health than the inhabitants of Westchester county residing on the banks of the Bronx. There is no people more robust; and it may be safely affirmed that no person has ever heard of the existence, in that neighborhood, of any peculiar or local complaint. Assuming, then, as facts, that the proposed waters are abundant, and that they are good, it remains to be shown how they are to be brought into the city of Newyork by means of the dam erected across Harlem river.

"Referring, then, to the map and profile herewith submitted, of the country between the Bronx and the Hudson made under the direction of the undersigned by Daniel Ewen, Esquire, city-surveyor, there rises, near the Bronx, in the land of John Bussing & Peter Bussing, a creek called Mill-brook, which traverses Westchester county, in a south-easterly direction, passing through the lands of Andrew Corsa, Robert Watts, James Morris, Valentine Morris, and Gouverneur Morris, when it discharges itself into Harlem-river. The source of this creek is at the point, marked on the map '*Summit* of *Mill-brook*', distant about 1400 feet from the Bronx. From this summit to the Bronx, the country is low and marshy, affording excellent excavation; and the height of the summit level of Mill-brook, above the level of the Bronx, is 5 feet 6 inches only. Of course, a dam six feet high, thrown across the Bronx, or a simple excavation, without a dam, averaging two feet in depth from the Bronx, to the summit-level, would divert the Bronx, from its natural channel, into that of Mill-brook. The Bronx then being brought into Mill-brook, by either of these means, will pursue the course of Mill-brook, and, if not interrupted, will discharge itself into Harlem-river. Pursuing this course about three miles, we come to a point marked on the map, '*Mulherring's-house*', whence it is proposed to pass over, either by means of an aqueduct, or of a tunnel, to a brook called Morrissania-creek, running parallel with Mill-brook, and discharging itself into Harlem-river, in a bay which forms the promontory called Devoe's-point. Morrissania-creek is separated from Mill-brook, at the crossing-place commencing at Mulherrings, by a hill whose extreme height is 52½ feet, and whose base is 1480 feet, making an average excavation of about 20 feet, for the whole distance. The waters from the Bronx, being brought over to Morrissania-creek, will naturally run into Harlem-river. When they shall arrive, at the point marked on the map, '*head of tidewater*', it is intended to carry them by an aqueduct or by pipes to Devoes-point, where the

dam across Harlem-river, is erected; the distance being less than a mile.

"By these means, the waters from the Bronx, may be brought to the dam at Harlem-river; the only obstacle to be overcome, which is worth mentioning being the elevated ground, already mentioned, between Mill-brook and Morrissania-creek. The water, when brought to the dam, is to be raised, by means of forcing-pumps, driven by vertical water-wheels, so calculated as to raise the requisite quantity for the daily consumption of the city, into a large reservoir, placed on the elevated ground, near the western end of the dam; the level of the water, in the reservoir, to be 100 feet above the Hudson. Having got on the island of Newyork, within 8 miles of the city, a plentiful supply of good water, with a head of 100 feet, it may be carried to Manhattanville in pipes through the low ground, until, we arrive at the banks of the Hudson; thence along the banks of that river, in order to avoid what are called Harlem-heights, making occasional diversions so as to favor the face of the country, until we come to the most elevated part of the inhabited plot of the city, towit, the junction of Broadway and The Bowery. Here it is proposed to erect the general reservoir, the elevation of which will be 57 feet above the Hudson; 15 feet above the Park, in its highest point, and 47 feet above the low streets. Of course, the water from the general reservoir will supply every portion of the city, without artificial elevation.

"Casting the eye over the whole of this plan, for bringing an abundant supply of good water into the city of Newyork, it plainly appears that the dam erected across Harlem-river, is the basis of the whole design. This work furnishes an aqueduct-bridge, not only, by which the proposed waters, may be carried over Harlem-river, but the great elevating power, which dispensing with the necessity of altitude in the Bronx, obviates almost entirely the necessity of pipes and aqueducts until we arrive within eight miles of the city. For it must be evident, that without such elevating power, the waters of the Bronx, can be brought into the city, either by subterranean pipes, or by an aqueduct or by both. Now, the Bronx, at the point where it is proposed to divert it, is exactly 50½ feet above the Hudson; as appears by the profile herewith submitted. The park is 42 feet above the Hudson, and the distance of the Bronx from the city, taking the course traced out, is 15 miles. Of course, we must ascend the Bronx, until we gain more elevation; by which means, we greatly lengthen the aqueduct, and increase the distance to be piped. Aqueducts and pipes are costly things; and the expense of them presents the greatest obstacle to the consummation of the present design; for there is no point, on the Bronx, whence the city can be supplied with water, by these

means, nearer than 21 miles. But in the plan now submitted for consideration, the waters of the Bronx, may, and of Rye-pond, by the reduction of a single hill, at an average excavation of 20 feet for 493 yards, or 1480 feet, or by a tunnel of that length, will be made to flow down to Harlem-river, through a natural channel, passing over a pebbly bottom, and undergoing the natural filtration which imparts vivacity and health to country water. These waters may be raised to any required height, by the power created by the dam; because the efficacy of the forcing-pump being the result of force, merely, applied to the plunger, and not depending on pneumatic principles, an increase of power, will give an increase of altitude; whereby any given quantity of water may be delivered into the city with such a head as will carry it over the highest houses, and suppercede, wholly, in cases of fire, the intervention of engines.

"Having attempted to demonstrate the practicability of bringing the waters of Rye-pond and of Bronx-river into the city of Newyork, at a very moderate expense, & of furnishing, thereby, an abundant supply of good water, for all private and public exigencies; having attempted to demonstrate, that the dam erected across Harlem-river, is the great instrument to effect this purpose; the undersigned feels animated with the cheering hope that the period is not distant when he may be instrumental under a beneficent Providence, in contributing to the lasting prosperity of our great and aspiring metropolis.

"Robert Macomb
"Newyork 1819."

"*Estimate* of the expense of bringing the water of Rye-pond and of Bronx river into the city of Newyork, agreeably to the plan of Robert Macomb.

| | | |
|---|---|---|
| 1. | To excavate from Bronx-river to the summit-level of Mill-Brook 100 rods at $3 pr. rod | 300 |
| 2. | To excavate the hill between Mill-Brook, and Morrissania creek, distance, say 1,600 feet, average height 20 ft. average width 30 ft. making 960.000 cubic feet or 48.000 city cart loads at 25/100. | 12000 |
| 4. | To rebuild the dam across Morrissania creek, at "head of tide waters" | 200 |
| 5. | Iron pipe 22 inch bore, from that dam, to the dam across Harlem river 2,640 ft. at $7 pr. foot including laying the pipe | 18480 |
| 6. | Reservoir, at the dam 4 million gallons | 9000 |
| 7. | Six double forcing pumps, at the dam, 5 feet stroke, 20 inch bore, and water wheel &ca at $5,000 each | 30000 |
| 8. | Mill buildings &ca | 40000 |
| 9. | Reservoir, on Newyork island, near the dam, 4 million galls | 9000 |

| | | |
|---|---|---|
| 10. | Six miles of iron pipes 22 inch from the last reservoir, to the junction of Bowery & Broadway at $7 pr. foot, including laying equal to 36960 dollars pr. mile | 221760 |
| 11. | Reservoir at junction of Bd.way and Bowery | 9000 |
| | | 351.740 |

"REVENUE

| | |
|---|---|
| "There are 22.000 houses in the city, and the number daily increasing. Suppose 7000 or ⅓ are supplied at $5. per an | 35.000 |
| 12 Fire Insurance Co. for the use of water in case of fire, per an. $500 | 6000 |
| Shipping including navy, say | 10.000 |
| Watering streets 5 months in the year, each house benefitted to pay 2 cents per day, say 12½ cents per week; or say 3 $\frac{00}{100}$ per ann: and 10.000 houses benefitted | 30.000 |
| Public gardens, baths, factories, tan-fats, breweries &ca say | 5000 |
| | 86.000" |

After repeated conferences with Mr. Macomb, and being satisfied that he and his associates had the requisite means to carry their project into effect, the Common Council committee in the spring of 1820, reported in favor of the project, with some resotions which were agreed to. The minutes, however, show nothing further.

### The First Municipal Water-Supply, 1829

During the decade following Macomb's proposition, there was not a year in which the water-supply question was not agitated.

In 1821, when Stephen Allen was Mayor, another resolution of inquiry into the best means of supplying the City water was adopted, and a committee appointed to procure plans, estimates, &c., provided the expense should not exceed two hundred dollars.

In 1822, the Mayor again brought the subject before the Common Council, and it was referred to a committee, of which he was one. At a meeting in April, they made a report of their observations, and recommended the appointment of an engineer to survey and profile the whole line between the City and the main source of the river Bronx. The recommendation was concurred in, and Canvas White was employed to make the survey and estimate.

In 1823, a scheme was started to bring the water of the Housatonic river to New York in an open canal, and an act of incorporation was obtained in Connecticut for this purpose. The Sharon

Canal Company was chartered by the State, and among its duties was that of supplying the City with water. The work was not undertaken, however.

In 1824, Mr. White made his report in favor of bringing the water of the Bronx to the City, taking it from the river at the West Chester cotton factory pond. The cost of bringing the water to a reservoir near the Park was estimated at $1,949,542.

In 1825, a company called the New York Water Works Company was incorporated by the Legislature, with authority to supply the City with pure water. Canvas White was appointed engineer to this company and in his report he recommended taking the water of the Bronx at Underhill's bridge, at an estimated expense of $1,450,000.

In 1826, the charter of the New York Water Works Company proved so defective in practice that they were unable to proceed under it, and applied to the Legislature for necessary amendments, in which they were opposed by the Sharon Canal Company, who claimed in their charter all the water on the route of the canal.

In 1827, the Water Works Company, unable to proceed, surrendered its charter, and the Legislature incorporated the "New York Well Company." The water was to be procured on the island by sinking wells in the most elevated grounds. The company made several attempts to procure water, but being satisfied by their experiments of the impracticability of the undertaking, the enterprise was abandoned.

In 1828, Levi Disbrow's plan of sinking an artesian well and reservoir in each ward of the City was the next plan. Though partially successful, the cost and uncertainty of supply forbade the prosecution of this plan.

At length, in 1829, the city adopted the recommendation of Alderman Samuel Stevens to establish a reservoir in the small block between Broadway, Fourth avenue, 13th and 14th streets, for the distribution of water for fire extinguishing purposes. The reservoir was an elevated tank, with a capacity of 233,000 gallons, its surface being 104 feet above sea-level. Its water came from a well at Jefferson Market, at the intersection of Sixth and Greenwich avenues, which was supplied by conduit galleries converging from different directions at the well. In 1832, a 12-

horse-power steam engine was installed at the well to force water through a main pipe to the reservoir.* The water was not good enough for domestic use; but the committee urged the laying of iron pipes, instead of the old-fashioned wooden pipes, arguing that when the long desired object of supplying the city with water for domestic purposes should be carried into effect, these same pipes would serve. A reluctant assent to these recommendations was wrung from the Common Council, and a committee was empowered to provide the necessary site for a reservoir, and to contract for iron pipes. This was the feeble and economical beginning of the city-owned water supply.

### From 1829 to the Croton Aqueduct

The provision of 1829 was confessedly inadequate, and during the next seven years events rapidly moved toward the Croton system.

In 1830, a motion was made in the Common Council to apply to the Legislature for all needful power to supply the City with water, and to create two millions of stock to defray the expense thereof, but did not prevail. May 17, a memorial from Francis B. Phelps proposed four different sources of supply: First, to bring the water the whole distance from Rye Pond in twenty-eight inch iron pipes; second, to bring the Croton river, by open canal, or by iron pipes; third, to bring the water of the Passaic, taken above the falls at Paterson, New Jersey, and cross the Hudson by iron pipes laid on the bottom of the river; fourth, by a plan of his own, probably wells and springs on the island.

In 1831, the Common Council referred the subject with the various commouncations to their Committee on Fire and Water, in the Board of Aldermen, consisting of Messrs. James Palmer, Samuel Stevens, and William Scote, who presented a report adducing facts and arguments sufficient to prove the practicability of the project, and the ability of the Corporation to meet the expense, and appended to their report was a letter directed to the Corporation and signed Cyrus Swan, who was "President of the New York and Sharon Coal Company," in which it was asserted that the Croton river could be carried into the City of New York, and that

* Haswell's Reminiscences, pp. 264, 285.

without it a supply adequate to the present and future wants of the City could not be obtained.

In 1832, the Committee drafted an "Act" for the Legislature to pass, which was approved by the Common Council and presented to the Legislature, but which failed to become a law. In November a report was made by Timothy Dewey and William Serrell to Benjamin Wright, recommending the Bronx as a sufficient source. The above-named Committee on Fire and Water, with Myndert Van Schaick, at that time a member of the Board of Aldermen, pursued the subject with energy. In December, De Witt Clinton, then of the United States Corps of Engineers, made a report in which he arrived at the conclusion that an adequate supply could only be obtained from the Croton river. He proposed an open aqueduct, and estimated the cost at $2,500,000.

In 1833, on February 26, the Legislature passed an act in compliance with the request of the Common Council providing for the appointment by the Governor and Senate of five persons as Water Commissioners, whose duty it was "to examine and consider all matters relative to supplying the City of New York with a sufficient supply of pure and wholesome water for the use of its inhabitants, and the amount of money necessary to effect that object." This act, giving the first effectual impetus to the work, was drawn up by Myndert Van Schaick, then a member of the Senate from the City of New York. The following named gentlemen were appointed under this law the Board of Water Commissioners: Stephen Allen, William W. Fox, Saul Alley, Charles Dusenberry, and Benjamin M. Brown. The Commissioners were directed to report the result of their examinations both to the Common Council and the Legislature, the City to defray all reasonable expenses. The Common Council having on the 5th of June appropriated $5000 to enable them to carry into effect the objects of the appointment, the Commissioners engaged Canvas White and Major Douglass to undertake the requisite surveys, examinations and estimates. Mr. White was prevented from acting, and Mr. Douglass commenced his surveys late in June, and they occupied him and his party till late in September, and the result was a firm conclusion that the Croton should be the source of supply. The plan of construction recommended was a continuous tunnel or aqueduct of masonry.

In February, 1834, the Common Council adopted a resolution accepting the proposal of the Manhattan Company to enter into a negotiation for the sale of the company's immunities, rights, and privileges of every kind, relative to the supply of the City with water. May 2 an act prepared like the former by Myndert Van Schaick, was passed by the Legislature, giving additional powers to the Commissioners, and requiring them to report the result of their investigations to the Common Council on or before the first day of January, 1835. In case the plan adopted by the Commissioners should be approved by the Common Council they should submit it to the electors. It further authorized the Common Council to raise $2,500,000 by the creation of a public fund or stock to be called "The Water Stock of the City of New York." The Governor and Senate reappointed the same commissioners, who, after thoroughly examining their former work, decided that the Croton river was the only source that would furnish an adequate supply. The engineers now employed were David B. Douglass, John Martineau, and George W. Cartwright. Various plans were again proposed to the Commissioners; among them that of Mr. Bradford Seymour of Utica, who proposed to erect a permanent dam in the Hudson river, extending from the foot of Amos street to the Jersey shore. Seymour's plan was to raise the water on the up-stream side of the dam from 18 to 24 inches, and by its fall generate 30,000 horse-power. Of this energy, 3,000 horse-power was to be used for pumping water to a reservoir on Manhattan island, leaving 27,000 horse-power for industrial purposes. Locks for the passage of shipping were included in his plan. He argued as another advantage that it would provide "an easy and safe communication between New York and Albany on the ice for three months of the year." He gave no estimate of the cost of this visionary project. Messrs. Martineau and Douglass expressed themselves in favor of a closed aqueduct of masonry from the Croton, estimating the cost at $5,412,336.72.

In 1835, a Committee of the Common Council to whom was referred the report of the Water Commissioners, approved the plan adopted by the Commissioners, and recommended a reference of the subject to the electors at the ensuing election. These resolutions were adopted by the Common Council, and at the election

in April the question was submitted to the electors with the following result:

| Wards | Yes | No |
|---|---|---|
| 1 | 1,417 | 27 |
| 2 | 1,248 | 25 |
| 3 | 1,456 | 42 |
| 4 | 1,794 | 51 |
| 5 | 1,675 | 152 |
| 6 | 1,305 | 103 |
| 7 | 1,303 | 561 |
| 8 | 1,511 | 702 |
| 9 | 631 | 1,015 |
| 10 | 966 | 1,030 |
| 11 | 880 | 873 |
| 12 | 545 | 136 |
| 13 | 654 | 739 |
| 14 | 1,233 | 209 |
| 15 | 712 | 297 |
| | 17,330 | 5,962 |

In July, 1836, the Common Council ordered pipe to be laid preparatory to the introduction of the water, and in October John B. Jervis was appointed Chief Engineer. The work of construction began early in 1837.

# CHAPTER V

## THE CROTON AQUEDUCT

### The Old Croton Dam

The work on the old Croton aqueduct which was commenced in 1837 began at a point on the Croton river about six miles from its mouth with the construction of a dam. This dam was designed to raise the water 40 feet above the level of the head of the aqueduct and 166 feet above mean tide.

The rock formation at the site is Fordham gneiss, and the rock bottom of the river was so deep as to give the engineers trouble at the very start. Even after shifting their plans, it was necessary to make an artificial foundation for part of the dam where they could not build it on the living rock. The southern abutment was of natural rock, and the aqueduct being on the southern side of the river, the water was conducted to its head by a tunnel cut 180 feet through the rock. The gateway was also located in the solid rock, unexposed to the floods of the river. A waste culvert was built in the north abutment, with suitable gates for drawing down the reservoir for repairs and to discharge the river at ordinary times during the course of construction. From this abutment the old channel of the river was filled by an embankment, with a heavy protection wall on the lower side which was raised fifteen feet above the waste weir of the dam and designed to be thirty feet wide on top. While this was in course of construction in January, 1841, the water rose until, when near the surface, it began to pass between the frozen and unfrozen earth about 20 inches from the top. Then, after the breach was made, heavy masses of ice came down from the reservoir and broke down the unfinished protection wall, with the result that the whole embankment was carried away. The masonry of the dam and abutment, however, suffered little damage. It was then decided to fill the breach thus made, about 200 feet long, by a

structure of hydraulic stone masonry, adapting 180 feet of it for a waste weir. This was effected with great difficulty in those days, it being necessary to lay an artificial foundation. The greatest height of the dam was 40 feet above low water level and 55 feet above the bed of the river. The masonry at low water line of the river was 61 feet long.

Three hundred feet below the main dam a second dam, 9 feet high, was built for the purpose of setting the water back over the apron of the main dam to form a pool of water which should receive the impact of the water passing over the main dam.

The old Croton dam impounded the water of the river in a reservoir five miles long and covering about 400 acres.

### High Bridge Over Harlem River

From the Croton dam a masonry aqueduct was built through the country and the villages of Sing Sing, Tarrytown, Dobbs Ferry, Hastings and Yonkers to the Harlem river opposite 174th street, Manhattan, a distance 32.88 miles. At this point, the next monumental structure of the aqueduct, namely High bridge, was erected. The valley of the Harlem river here, at the aqueduct level, is 1450 feet wide, and it required a structure of that length to conduct the water across the river to the Island of Manhattan. The width of the river at ordinary high water mark was then 620 feet, but at low ebb tides was reduced to about 300 feet. It has since been narrowed by filling out the shores. The southeastern shore is bold and rocky, rising from the water's edge at an angle of about 30° to a height of 220 feet. On the northwestern shore, a strip of table land extends back from the water about 400 feet to the foot of a rocky hill which rises at an angle of about 20° to a considerable height above the level of the aqueduct.

Across this interval was constructed a picturesque masonry bridge, supported, in the Roman style, by piers connected by half round arches. There are fifteen of these arches. Eight of them, over the river proper, have a span of 80 feet each. The others are of 50 feet span. Across the structure, above the arches and below the roadbed, were originally laid two 36-inch cast iron pipes. A third pipe 90 inches in diameter was added in 1860–61. The Chief Engineer, John B. Jervis, explained that "the object

of using pipes in this case is more effectually to secure the conduit from leakage that might eventually injure the masonry of the bridge, and it incidentally allows the bridge to be constructed of less height." (See plates 9 and 10.)

The whole length of High bridge is 1450 feet; the height of the river piers above high water is 60 feet to the spring of the arches and the height from high water mark to the under side of the arches at their crown 100 feet. The height to the top of the cornice was originally 114 feet above high water and 149 feet above the lowest foundation of the piers, but it was raised about six feet in 1860–63. The width across the top is 21 feet.

High bridge was not completed until about six years after the other parts of the aqueduct had been finished, and water did not pass over it until May, 1848. Meanwhile, the water had been carried through an inverted siphon under the Harlem river so that it was introduced into the City in 1842 as stated hereafter. The cost of High bridge was stated in 1849 to have been $963,427.80. The following inscription is on the southern face of one of the eastern piers of the bridge:

Aqueduct Bridge

Begun 1839 — Finished 1848

Stephen Allen
Saul Alley
C. Dusenberry
W. W. Fox
T. T. Woodruff
} Water Commissioners

John B. Jervis, Chief
H. Allen, Princ. Assist.
P. Hastie, Resident
E. H. Tracy, Assistant
} Engineres

George Law
Samuel Roberts
Arnold Mason
} Contractors

On the south face of the westernmost pier is the following inscription:

Aqueduct Bridge

Finished December 31, 1848

Philip Hone
Nathaniel Weed
M. O. Roberts
J. H. Hobart Haws
A. C. Kingsland
} Water Commissioners

John B. Jervis, Chief
P. Hastie, Resident
E. H. Tracy, Assistant
} Engineers

I. Vervalen, Inspector of Masonry

George Law
Samuel Roberts } Contractors
Arnold Mason

Within 20 years the capacity of High Bridge had to be increased by adding to the original two cast-iron conduits a wrought-iron pipe 90 inches in diameter. In order to cover this additional pipe, the sides of the bridge were raised about six feet and the structure was covered with a flat brick arch which serves as the pavement of the promenade. The latter, although wide enough for vehicles, is restricted to the use of pedestrians. A wrought iron fence 41½ inches high surmounts the cornice on either side of the promenade. The improvement is recorded in an inscription on the gate-house at the Manhattan end as follows:

The improvement of this bridge by adding the large
pipe, raising the side walls and covering the whole
work with an arch was commenced Oct. 1860.
The new pipe was put in operation Dec. 1861.
The masonry completed 1863.

Croton Aqueduct Board

Thos. Stephens
President Commissioner.

Thos. B. Tappen
Assistant Commiss'r to Dec. 4, 1862

Rob't L. Darragh
Assistant Commiss'r from Dec. 4, 1862

Alfred W. Craven
Commissioner and Engineer in Chief

Engineers

Geo. S. Greene
Engineer in Charge to Jan. 31, 1862

Wm. L. Dearborn
Engineer in Charge from Feb. 1, 1862

Contractors

Thos. F. Rowland for the pipe

J. P. Cumming for the masonry

High Bridge was the sole means of conveying Croton water from the mainland to Manhattan Island up to July 15, 1890, when water was first supplied through the new siphon under the Harlem river near Washington bridge.

### The Yorkville Reservoir in Central Park

From the Manhattan end of High bridge, the masonry aqueduct continues two miles along the line of Tenth avenue to the high ground on the north side of Manhattan valley at Man-

hattan street. This valley is 0.792 of a mile wide at the aqueduct level below which it descends 102 feet. The names of the landmarks in Chief Engineer Jervis' description of seventy years ago sound archaic to-day. He says that at Manhattan valley "the conduit of masonry here gives place to iron pipes which descend into the bottom of the valley and rise again to the proper level on the opposite side; from which point the masonry conduit is again resumed, and crossing the Asylum ridge and Clendenning valley is continued 2.173 miles to the receiving reservoir at York hill."

Asylum ridge was the name for Morningside heights where Columbia University now stands and where the Bloomingdale asylum formerly stood. Clendenning valley was a depression between 101st and 99th streets, named after John Clendenning, whose house was at the present 104th street and Columbus avenue. And York hill, named after the neighboring Yorkville, is now included in Central Park (which did not then exist) between the lines of 79th and 86th streets. (See plate 29.)

The old Yorkville reservoir, as it was called, is rectangular in shape, 1,826 feet long and 836 feet wide. Its area at the water line is 31 acres, including embankments 35.05 acres, and with accessories 37.05 acres. It has a storage capacity of 150,000,000 imperial gallons according to Mr. Jervis' figures, but more recently stated at 180,000,000. Of the 37 acres occupied by the reservoir, 27½ acres were common lands of the city, and 9½ acres were acquired in two blocks of 4¾ acres each from Hickson W. Field and William Matthews. The City paid $11,000 for each of these blocks or $22,000 for 9½ acres. The water was admitted into the Yorkville reservoir with due ceremony on June 27, 1842, in the presence of the Mayor, the Common Council, the Governor, the members of the Court for the Correction of Errors (then the highest court of appeals in the State), and a great gathering of people. A feature of the celebration was the arrival of the boat Croton Maid. This boat, large enough to hold four persons, had been launched at the Croton reservoir thirty-eight miles distant and sent through the aqueduct to High bridge, where it arrived June 23. On the 27th it was carried across the Harlem and put into the aqueduct again and arrived at Central

Park soon after the artillery salute of thirty-eight guns had announced the arrival of the water. The boat was presented to the fire department with an appropriate speech by the President of the Board of Water Commissioners.

On December 17, 1860, the Croton Aqueduct Board assented to the removal of the wall at the southwest corner of the reservoir, where the Belvidere was subsequently erected, on condition that the Park Commissioners should place some suitable monument to mark the line of the aqueduct property; that no public walk be made on the property; and that no objection would be made at any time to the reoccupation of the corner by the aqueduct commissioners. This reservoir is soon to be abandoned for aqueduct purposes and the Mayor's Catskill Aqueduct Celebration Committee is developing plans for adding it to Central Park as a permanent memorial of the aqueduct.

### The Murray Hill Reservoir

From the upper reservoir at Yorkville, a double line of iron pipes 3 feet in diameter was laid to Fifth avenue and thence to the distributing reservoir which formerly stood on the west side of Fifth avenue between 40th and 42nd streets. This reservoir was 420 feet square on the cornice of the exterior wall and contained 4.05 acres. It had an average elevation of 44.5 feet above the street level, the greatest height being 49 feet. The walls were of hydraulic masonry, constructed with openings to reduce the quantity of masonry and give a larger base. The reservoir was composed of a double wall. The outer wall had a bevel of one to six and was uniformly four feet thick. The inner wall, which had a vertical inner face, was six feet thick at the bottom and four at the top. There were cross walls and arches in the interspace. On the outside walls an Egyptian cornice was laid, which was in keeping with the sloping architecture. The reservoir was designed to hold a depth of 36 feet of water, or a capacity of 20,000,000 imperial gallons. The surface of the water, when the reservoir was full, was 115 feet above mean tide. The water was admitted to this reservoir with formal ceremonies on July 4, 1842. The reservoir was then described as being "at Murray hill, a short drive from the city." The total length of the aqueduct from Croton dam to this point is 45.562 miles.

In the spring of 1899, a contract was let for the removal of the reservoir to make room for the New York Public Library which now occupies its site, but the process of removal was slow, and portions of the massive walls remained standing long after the library building had been begun. The cornerstone of the library was laid on November 10, 1902, and the completed building was dedicated on May 2, 1911. By the thoughtfulness of Mr. Thomas Hastings, architect, the memorial inscription from the old reservoir is preserved in the Public Library.

### Extension to City Hall Park

On October 14, 1842, the water was admitted to the fountain in City Hall Park with still further ceremonies, including a procession seven miles long. The fountain was situated in the triangular area now occupied by the post-office. At that time, there was an unobstructed view from the junction of Broadway and Chatham street (Park row) in front of St. Paul's chapel to the City Hall. The larger park was embowered with trees, in the midst of which the Croton fountain was for many years a graceful ornament.

In a statement of the real estate belonging to the City of New York published in the Corporation Manual for 1852, the value of the Croton water-works at that time was stated as follows:

| | |
|---|---|
| Croton aqueduct ..... | $14,200,000 |
| Yorkville reservoir ..... | 134,000 |
| Murray Hill reservoir..... | 152,000 |
| | $14,486,000 |

Since that time the Croton water-supply and the water-works system have been enormously increased, and it is impossible here to follow out its details. One or two further features, however, may be mentioned.

### Lake Manahatta in Central Park

One enlargement of interest was the building of the new reservoir or Lake Manahatta in Central Park. In less than a decade after the introduction of the Croton water supply, the City realized that it did not have storage capacity enough in its reser-

voirs to protect it against a serious drought, and on February 5, 1851, the Common Council directed the Croton Aqueduct Board "to purchase without unnecessary delay enough suitable ground for a new reservoir of sufficient capacity with those already built to contain a supply for at least sixty days' consumption." The Board thereupon carefully examined the island and on February 9, 1852, voted to appropriate for that purpose the rectangular area comprised between Fifth and Seventh avenues and Eighty-sixth and Ninety-sixth streets, as those streets were laid out on the city plan by the Commissioners of 1807. On May 21, 1852, the Board recommended to the court the following named gentlemen as Commissioners of Estimate of the value of the ground to be taken: Daniel Dodge, Samuel B. Ruggles, Ezra P. Davis, Jacob S. Baker, Jedediah Miller and Anthony J. Bleecker.

Before work was begun on the reservoir, Central Park was created, including the reservoir area, and the Park Commissioners proposed an exchange of territory by which the new reservoir, instead of being rectangular, would follow natural contours and by avoiding some rock excavation, would save from $200,000 to $250,000 in the cost of construction. The Croton Aqueduct Board, therefore, on June 6, 1857, consented to the change and the reservoir was built as it now exists. The land for this reservoir, purchased under an act of the Legislature of June 30, 1853, comprises 106.726 acres, and the reservoir, which covers ninety-six acres, has a capacity of 1,030,000,000 gallons. On April 14, 1858, the sum of $729,964.50 was awarded for the site. (See plate 28.)

This new reservoir, called on a map of 1859 Manahatta Lake,* in the records of the Aqueduct Board the Grand Reservoir, and popularly the New Reservoir, was completed in 1862 and the water was admitted on August 19th with due ceremony. The minutes of the Croton Aqueduct Board of that date read as follows:

"The water was let into the new Grand Reservoir on this day at 3 P. M. The signal was given by Chief Engineer Alfred W. Craven, Esq., when the ten influent gates were raised simul-

* Mayor Tiemann so named it at the ceremonies attending the induction of the water, saying: "Our new lake of the Manahatta will far surpass the dimensions of the old kolch" (or fresh-water pond).

taneously, and the Croton flowed through to the delight of the thousands that were present to witness the great event. His Honor the Mayor then introduced Myndert Van Schaick, who delivered an address, after which Mr. McChesney recited an ode prepared for the occasion, and with an address by Mr. Marsh and music by Mr. H. Dodworth's band the ceremonies ended and the assembled multitude dispersed to pay their respects to the contractors, Messrs. Fairchild, Walker & Company, at their office."

### New Croton Aqueduct

On account of the phenomenal growth of the city, it became necessary not only to build additional reservoirs from time to time, but also to build another aqueduct from the Croton valley to conduct the increased supply of water to Manhattan island. Such a new conduit was built in 1885–1893. It is almost entirely a tunnel from Croton lake to the terminal gate-house at 135th street and Convent avenue, a distance of 31 miles. At this gate-house the old aqueduct is connected with the new. The old Croton aqueduct, with a capacity of 90,000,000 gallons a day and the new Croton aqueduct with a capacity of 300,000,000 gallons a day, were supplemented in 1880 and 1885 by an additional supply of 22,000,000 gallons a day by a conduit bringing water from the Bronx and Byram rivers.

### The Cornell or New Croton Dam

When the plans were made in 1882–1885 for an enlarged water-supply, they included the project for a high masonry dam across the Croton river about two miles from its mouth, at the side of the old Quaker bridge. Owing to local opposition to this site, another location was selected about 1¼ miles farther up-stream on the land of A. B. Cornell and others. The dam here constructed was at first called the Cornell dam, but later was designated as the New Croton dam, to distinguish it from the old Croton dam 3½ miles farther up-stream. (See plate 11.)

The rock at the dam site is gneiss on the north side of the valley and limestone in the center and on the south side.

The contract for building the dam was awarded August 26, 1892; work was begun in the fall of 1892; the first stone in the foundation was laid May 26, 1896; the dam was nearly finished

and the gates were closed January 28, 1905, beginning the storage of water; the work was completed January 1, 1906; and by November 5, 1907, the reservoir was full to high water mark.

The total length of the masonry and earth dams across the channel is 1600 feet; the total height from bottom of foundation about 240 feet; and the maximum thickness of masonry at the bottom 206 feet. The thickness of masonry decreases toward the top until it is only about 15 feet thick under the roadway. The roadway has a width of 19½ feet by being carried out on corbels. The reservoir thus formed is about 19 miles long and stores about 33,815,000,000 gallons.

The plans for the new Croton dam were prepared under the direction of the late Alphonse Fteley, Chief Engineer of the Aqueduct Commissioners. They were modified as the work progressed. The construction was carried on under his supervision until January 1, 1900; then under Mr. William R. Hill until October 14, 1903; Mr. J. Waldo Smith until August 1, 1905; and Mr. Walter H. Sears until completion.

The cost of the dam, not including engineering, land and legal expenses, was $6,886,872.

Even this provision was not adequate to the growing needs of the City, and two more sources were added in 1908 and 1911, making the total storage capacity of the Croton system as follows:

| Reservoir | Service Begun | Gallons of Storage Capacity |
|---|---|---|
| Old Croton Lake | 1842 | |
| Boyd's Corners | 1873 | 2,727,000,000 |
| Middle Branch | 1878 | 4,155,000,000 |
| East Branch (Sodom) | 1891 | 5,243,000,000 |
| Bog Brook | 1891 | 4,400,000,000 |
| Titicus | 1893 | 7,617,000,000 |
| West Branch (Carmel) | 1895 | 10,668,000,000 |
| Amawalk | 1897 | 7,086,000,000 |
| New Croton | 1905 | 33,815,000,000 |
| Cross River | 1908 | 10,923,000,000 |
| Croton Falls | 1911 | 15,753,000,000 |
| | | 102,387,000,000 |

# CHAPTER VI

## OTHER BOROUGH WATER-SUPPLIES

### Borough of Brooklyn

The town of Brooklyn was settled in 1636, ten years after the first permanent settlement of New Amsterdam, and the early histories of the water-supplies of the two communities were very much alike, both depending on natural springs, streams, ponds and wells. But on account of the differences in geographical and geological situation, the two developed very differently after the beginning of the nineteenth century. Old New York City, lying on a rocky island only 13 miles long and from 1 to 2¼ miles wide, had small natural resources for water and was early driven to seek an artificial supply. Brooklyn, situated on an island which is 115 miles long and from 12 to 24 miles wide, and which is composed largely of sand and gravel, was able longer to use natural sources, and, as a matter of fact, she relied exclusively upon springs, streams, ponds and wells up to the year 1859 and largely so up to the present time.

The first suggestion of a general water-supply was made in 1832, two years before the village of Brooklyn was incorporated as a city; and after Brooklyn became a city, the subject was discussed over and over again without substantial results for twenty years. Numerous committees were appointed and made reports. Some recommended co-operation with New York in using Croton water; others advocated using the streams of Long Island; and still others the construction of wells in or near the city. In 1851, a supply from the Bronx river was added to the sources proposed.

In these discussions, the underground water condition of Long Island was the subject of earnest and at times contentious dis-

* I. M. de Varona, in his "History and Description of the Water Supply of Brooklyn," 1896, says that prior to the introduction of Croton water in New York City, Brooklyn wells were largely drawn upon for New York's water supply.

cussion. There were those who thought that the water existed in veins; others who thought there were subterranean rivers; and others who held that the whole island was saturated with water. When William J. McAlpine in 1852 recommended artesian wells, Prof. William W. Mather's report on the geology of New York was quoted to refute it. There were those who believed that a well fifty feet deep would draw salt water. At one time an open canal was advocated. The best plan that the municipal authorities could evolve after nearly 20 years of discussion was submitted to the people in 1853 and voted down.

While these futile efforts were being made by the public authorities, an enterprising private water corporation was formed, somewhat paralleling New York's early experience with the Manhattan Company. In 1852, the Williamsburgh Water Works company was incorporated, with a view to taking water from a well within the city limits and from springs on the north side of Long Island, and made a formal offer to supply the City of Brooklyn. This raised the question whether the city should depend upon a private company for its water or should possess its own supply. In the exigencies of the situation, the Common Council held secret sessions and public interest was greatly stirred. In one of these secret sessions, a plan recommended by Mr. McAlpine was approved. The plan provided for collecting at Baisley's pond the water of certain streams emptying into Jamaica and Hempstead Bays; conducting it in a conduit 9 miles long to a pump-well where it was to be pumped into a reservoir on Mount Prospect, near Prospect Park. In 1853, a modified plan was submitted to the people's vote and rejected. In 1854, the annexation of the City of Williamsburgh and town of Bushwick to Brooklyn gave renewed impetus to the subject.

Meanwhile, the Williamsburgh Water-Works company had undergone changes, its name being changed first to the Long Island Water-Works company, and then (in 1855) to the Brooklyn Water company. In the latter year, the Nassau Water company was incorporated, with power to absorb the Brooklyn Water company. All this time, the company had been gradually acquiring water rights, until it became necessary for the city either to buy it out or use its water, although the city too had been buying land and water rights here and there for its own use.

In 1856 the Common Council subscribed $1,300,000 to the stock of the Nassau Water company upon condition that it should construct works capable of supplying 20,000,000 gallons a day; that it should purchase the lands bought by the city which were necessary for the purpose; and that the city should have the privilege of buying out the whole plant at cost. This was the beginning of the Ridgewood system; and the inaugural celebration was held on the site of the Ridgewood reservoir July 31, 1856. In the following year the city availed itself of its privilege and bought out the Nassau Water company and finished the work itself. On November 18, 1858, water was first pumped into the Ridgewood reservoir; water was admitted to the distributing mains on December 4, and on December 16 it was used for the first time in the city to extinguish fires. On April 27 and 28, 1859, the successful completion of the main features of the plan was marked by a public celebration. Prior to this event, Brooklyn water had come exclusively from wells and cisterns.

In 1872 the construction of the Hempstead reservoir was begun and the water-supply was further augmented from time to time by pumping stations at various ponds. In 1889, the construction of a new reservoir at Millburn, a 48-inch pipe line connecting it with the engine house at Ridgewood, and various supply ponds and intermediate conduits were contracted for.

The Ridgewood system was expanded at successive periods until in 1898 it embraced practically all the water-shed of Queens county, bounded on the north by the ridge forming the backbone of Long Island, on the east approximately by Suffolk county, on the south by the salt meadows bordering Hempstead and Jamaica bays, and on the west by Kings county.

While the events above narrated were occurring, private waterworks were organized in New Lots, Flatbush, New Utrecht and Gravesend.

The plant at New Lots, belonging to the Long Island Water-Supply Co., was located on New Lots avenue at the head of Fresh creek and was built in 1881.

The New Utrecht Water Co. had its plant at the corner of East 14th street and Avenue E. It was acquired by the City of Brooklyn in 1895.

The Gravesend Water-Works, built by the town of Gravesend about 1892, was located on 17th street between Avenues R and S. It became the property of Brooklyn in 1895.

The works of the Flatbush Water Company were built in 1882 at the head of Paerdegat creek, near the intersection of New York avenue and Avenue E.

The Flatbush Water-Works is still a private company serving the 29th ward.

Another private concern, the Blythebourne Water Company, serves a portion of the 30th ward.

Up to the year 1896, just before her consolidation with Greater New York, Brooklyn had bought 2,706 acres of land at a cost of $1,261,271, and spent $22,102,700 for the construction or purchase of water-works. She then had an average water-supply of about 75,735,000 gallons a day from the Ridgewood system, which the subsequent completion of the Millburn works increased to about 99,000,000 gallons a day. She owned fifteen supply ponds with an area of 215 acres and storage capacity of 264,489,000 gallons, as follows: Baisley's, Springfield, Simonson's, Clear Stream, Watt's, Valley Stream, Pine's, Hempstead, Smith's, Millburn, East Meadow, Newbridge, Wantagh, Seaman's, and Massapequa pond.

In 1916, Brooklyn had an average water-supply of 73,000,000 a day from drawn wells of a depth of from 30 to several hundred feet; 34,000,000 gallons a day from infiltration galleries laid for nearly six miles about ten to fifteen feet below the water-table; and 20,000,000 gallons a day from surface supplies.

### Borough of Queens

For the Borough of Queens no municipal water-works of magnitude have been constructed. Prior to 1913 the First ward was served by three local municipal pumping stations and by private water companies. Between 1913 and 1917 it was served largely from the Brooklyn watershed. The Third ward, prior to 1917, was served by two municipal pumping stations, while the Second, Fourth and Fifth wards were and still are supplied by private water companies, their sources of supply being entirely ground water collected by means of driven wells. The Citizens' Water

Supply Company of Newtown and the Urban Water Company furnish water for the Second ward, the Jamaica Water Supply Company and the Woodhaven Water Supply Company for the Fourth ward and the Queens County Water Company for the Fifth ward. About 400,000 citizens of Brooklyn and Queens Boroughs, consuming nearly 40,000,000 gallons a day, are still dependent on private water companies.

### Borough of the Bronx

The region now comprised within the Borough of the Bronx was favorably situated with respect to its natural water resources. Traversed by more than a score of rivers and creeks of considerable size, among which may be mentioned Bronx river, Tippett's brook, Cromwell's creek, Westchester creek and Eastchester or Hutchinson's river, and with a soil well adapted for springs and wells, the early settlers did not lack good water for domestic use or sufficient volume to turn the wheels of several considerable mills. Among the best known of the latter were the Van Cortlandt grist mill in what is now Van Cortlandt Park and the Lorillard Tobacco mill in Bronx Park.

On January 1, 1874, that portion of Westchester county west of the Bronx and south of the Yonkers line was annexed to the City of New York; on July 1, 1895, the 24th ward was somewhat enlarged on the east of the Bronx; and on January 1, 1898, the remainder of the present borough was added to the city.

With these successive additions of territory, the responsibility of the city with respect to its water supply increased, and in October, 1880, it began to develop the Bronx and Byram watersheds for the supply of the higher levels of the Annexed District. The plan comprised a dam at the outlet of Little Rye pond converting the two Rye ponds into a reservoir holding 1,050,000,000 gallons; a dam across the Bronx river near Kensico station on the Harlem railroad, making a reservoir holding 1,620,000,000 gallons; a dam across Byram Rrver a fifth of a mile north of the State line, making a reservoir of 180,000,000 gallons, and a 48-inch conduit fifteen miles long from Kensico reservoir to a reservoir on Gun hill near Williamsbridge, which latter had a capacity of 120,000,000 gallons. In addition to the above, Byram

pond held 550,000,000 gallons. The connection between Kensico and Williamsbridge reservoirs was made September 4, 1884, and the other developments gradually followed. In 1902 connection was made with the old Croton aqueduct by means of a 48-inch pipe for supplying lower levels in the Bronx; and there were some connections from Manhattan under the Harlem river for supplying some of the nearer areas of the mainland borough.

There was one private water-supply company in the Bronx borough area, the Westchester Water Company, which supplied Westchester Village and vicinity. Between 1900 and 1902 the city bought out the interests of this company within the city line, but it still serves water to communities just outside the city.

There are still many private wells in use in this borough.

Jerome Park reservoir, an adjunct of the Croton system, was begun in 1895 and its western basin was finished in 1905. It holds 773,000,000 gallons. Its eastern basin was never completed, and in 1911 the Legislature authorized the use of part of the ground for an armory.

In recent years, nearly three-fourths of the Bronx borough supply came from the Croton and the remainder from the Bronx and Byram watersheds. As stated hereafter, the old Kensico reservoir has been merged in the new Kensico reservoir of the Catskill system, and at that point, the supplies from the Bronx and Byram watersheds become merged in the Catskill supply.

### Borough of Richmond

Prior to 1917 the Borough of Richmond was dependent for its supply on ground water drawn from wells. Until 1909, except at Tottenville, it was served by private water companies, the principal of which were in that year acquired by the city.

# PART II

## THE CATSKILL AQUEDUCT

[753]

# CHAPTER I

## THE CATSKILL AQUEDUCT

### The Evolution of the Project

The history of the evolution of the Catskill aqueduct project is full of intense interest and civic significance, and to write it fully would require a volume by itself. For the purposes of this pamphlet, only a few leading events must suffice.

All history is an endless chain of cause and effect, and the question of the water-supply of any growing community is never-ending. Nevertheless, one is able to point out quite definitely the origin of the Catskill aqueduct idea.

With a population which was approaching 3,500,000 souls in the area of Greater New York at the time of municipal consolidation in 1898 and which was increasing at the rate of a million a decade; with the Croton water supply developed to its fullest extent and confessedly running behind the needs of Manhattan and the Bronx; with Brooklyn, Queens and Richmond boroughs relying on local supplies largely derived from wells and in many cases purveyed by private companies; and with alarming deficiencies in rainfall in 1895 and 1896, it was plainly manifest that something must be done and done quickly to avert a calamitous shortage of water in the near future.

This realization came with especial force to certain individuals and civic organizations. On November 2, 1896, the Manufacturers' Association of Brooklyn, under the leadership of Mr. Charles N. Chadwick, took the active initiative by appointing a committee, of which Mr. Chadwick was Chairman, to investigate the problem of Brooklyn's water-supply. The reports of this committee are very suggestive of the civic foresight and the thoroughness of research which Andrew H. Green, "The Father of Greater New York," manifested in his writings in advocacy of municipal consolidation. Lacking,— as the committee's report of March 15, 1897, stated,— the power to bring rain from the clouds by incantations like the Indian Rainmaker, or to bring water from

the rocks by smiting them with a rod like Moses, or to discover subterranean streams by means of the forked witch-hazel stick, Mr. Chadwick investigated the subject with all the practical thoroughness that human limitations would permit. He made a particular study of the water-supplies of 200 cities in this country and Europe, including that of the Metropolitan district which was soon to become Greater New York. He found that the sister cities and smaller communities in this area never had a settled plan for developing water-supply and had lived only in a hand-to-mouth way with inadequate appropriations for any large provision for the future. He believed the question should be handled in a broader way than ever before, and out of his studies he developed four fundamental ideas: First, that the new water-supply should be comprehensive enough to include the whole of the future Greater City; second, that it should be financed by separating the water debt from the constitutional debt limit of the city; third, that in planning and providing this larger water-supply, there should be continuity of administration outside of the field of political influence; and fourth, that provision should be made looking to the needs of the Metropolis for at least half a century to come. The influence of these ideas may be traced through all the formative events which followed the report of the Manufacturers' Association.

It is also a significant fact, which deserves to be dwelt on at greater length than the limits of these pages will permit, that while the project of the Catskill aqeduct encountered great apathy and even opposition in many quarters, it received the helpful and indispensable co-operation of other civic bodies, notably the Chamber of Commerce of the State of New York, the Merchants' Association of New York, the City Club, the New York Board of Trade and Transportation, the Brooklyn League, the Flatbush Taxpayers' Association, the Citizens' Union, the New York Board of Fire Underwriters, the People's Institute ,the East Side Civic Club, the West End Association, etc. It was a citizens' movement throughout, animated by the highest and most disinterested motives.

In 1897, the possible new sources of water under consideration were the Ten Mile river and Housatonic river as a continuation

of the Croton watershed; the Delaware river at Port Jervis, N. Y.; the Ramapo watershed; and the Catskill Mountains, with the Adirondacks ultimately in view. As a last resort, more particularly for Brooklyn, the Long Island watershed was not forgotten.

A serious obstacle to a free survey of all possible sources, however, was presented by the existence of the Ramapo Water Company. This company, which had been incorporated by certificate in 1887, had in 1895 secured the passage of a law entitled "An act to limit and define the powers of the Ramapo Water Company." Instead of "limiting" its powers, the act enlarged them so that it was authorized to acquire lands in the Ramapo watershed by condemnation in the same manner as a railroad company; and to construct reservoirs and water-works and to supply water for municipal, domestic, manufacturing and agricultural purposes. It was also authorized to lay pipes under the navigable streams of the State. These broad powers aroused intense public criticism and an effort was immediately begun for their repeal. In this campaign, which proved successful, the Merchants' Association, under the leadership of the late William F. King, performed public service of inestimable value, working through a large Citizens' Committee, one of the members of which was Mr. Henry R. Towne,* who served on the engineering subcommittee. As a result of these efforts the Legislature, in 1901, repealed the Ramapo Act of 1895.

Meanwhile, on March 23, 1900, Mr. John R. Freeman, civil engineer, reported to the Comptroller that the Croton, Bronx and Byram watersheds would supply Manhattan and Bronx Boroughs for only five years. This was fresh evidence of the need for expedition; and in the Legislature of 1901 the Manufacturers Association secured the introduction of a bill, drafted by Mr. Chadwick, providing for the appointment of a Board of Water

* Mr. Towne's services were not confined to this one phase of the subject. As Chairman of the Committee on Water Supply of the Merchants' Association, its President for nearly six years, and one of its Directors during the whole period, he has been one of the ablest and most untiring advocates of the Aqueduct, and his aid in shaping public sentiment and in securing proper legislation entitle him to special credit as one of the "fathers" of this great public work.

Commissioners with mandatory powers to go ahead and provide an enlarged water-supply. The bill failed to pass and was reintroduced in 1902, slightly amended, and providing, among other things, for the appointment of the members of the board by the Mayor. Again the bill failed to pass, but efforts were not relaxed.

On November 30, 1903, Prof, William H. Burr, Mr. Rudolph Hering and Mr. John R. Freeman, constituting a Commission on Additional Water Supply, made a notable report which not only added impetus to the movement but was also immensely helpful in later selecting the Catskill watersheds.

In 1904, two important strides were made toward the attainment of the goal. The first was the getting together of the civic organizations in concerted work. The second was the enlistment of Mayor McClellan's interest.

The first of these was achieved at a joint conference held at the City Club on June 9, 1904. All of the civic organizations mentioned on page 756 preceding were represented. Prof. Burr and Mr. Hering explained to the conference the situation which confronted the City; and Mr. Chadwick emphasized the necessity of getting down to practical work and formulating a plan. He also urged the necessity of separating the water-debt from the debt limit, so that the project could be amply financed; and of creating a commission with large powers, like the Rapid Transit Commission, to carry on the work. The meeting resulted in the appointment of a representative committee of these civic bodies, and from that time forward there was splendid "team work" between them. The meetings of the representatives of the civic bodies at the City Club continued for a period of six months or more.

In July, 1904, the gravity of the situation was brought to the attention of Mayor McClellan by a sub-committee of the conference, consisting of Mr. Horace E. Deming of the City Club, Mr. Charles N. Chadwick of the Manufacturers' Association, Mr. Robert Van Iderstine of the Citizens' Union, Mr. Abner S. Haight of the Brooklyn League, Mr. George W. Brush of the Flatbush Taxpayers' Association, Mr. Henry Evans of the New York Board of Fire Underwriters, Mr. A. B. Hepburn of the Chamber of Commerce, Mr. Oscar S. Straus of the Board of Trade and Trans-

portation, and Mr. Lawrence Veiller of the City Club, in behalf of their own and the associated organizations. Mayor McClellan's interest was instantly enlisted and proved a powerful factor of the success which soon followed.

On January 3, 1905, with the backing of Mayor McClellan, a new bill for the creation of a Board of Water Supply was introduced in the Legislature. Gov. Higgins did not at first regard the measure favorably, as he was an advocate of the development of all the water resources of the State under State auspices. On February 16, 1905, Mr. Chadwick went to Albany and saw the Governor by appointment, explained the situation, removed the Governor's objections and secured his endorsement of the general provisions of the bill; and from that time forward, Gov. Higgins was a firm advocate of the measure.

The situation in the Legislature, however, was not altogether promising, and a special effort was made to carry conviction at a legislative hearing held February 20, 1905. Mayor McClellan, ex-Mayor Low, Corporation Counsel Delaney, and a committee of representatives of the joint conference of civic bodies of which Mr. Horace E. Deming was Chairman, went to Albany on this occasion. In addition to the influence of this notable delegation, Governor Higgins, on that very day, threw into the scales the weight of a special message to the Legislature urging the passage of the bill.

One of the strongest supporters of the Mayor's bill at this critical time was the Chamber of Commerce. An able report made to that organization on February 28, 1905, by Mr. A. B. Hepburn, Chairman of the Committee on Internal Trade and Improvements, said, among other things:

"The Mayor's bill * * * contains within itself everything necessary to secure with the utmost possible speed the additional water-supply so much needed, to put the control of the undertaking from start to finish in the hands of a small efficient, non-political business body, responsible directly to the city, and at the same time establishes rules of justice and fair dealing readily enforceable in the courts.

"The securing of an adequate additional water supply for the city will cost probably $100,000,000 and the undertaking demands a consistent and continuous business policy that will last through

several city administrations. This means, on the one hand, that the city should control the spending of so vast an amount of the money of the citizens, and, on the other, that the control of so stupendous a business enterprise should be removed absolutely from the exigencies of political parties or political partisanship."

In the mutations through which the bill passed while in the committee stage in the Legislature, the loss of one feature caused much concern. One of the primary objects which had been kept in mind by the projectors of the movement from its very inception in 1897 had been to keep on a high civic plane and outside of partisan politics the administration of the commission which was to build the aqueduct; and it was conceived that if an impartial selection of commissioners could be assured, it would tend to remove much of the opposition to the bill. A provision had therefore been inserted in the Mayor's bill requiring the appointment of the three members of the proposed Board of Water Supply from lists supplied by the Chamber of Commerce, the Board of Fire Underwriters and the Manufacturers' Association. This had been stricken out, however, as unconstitutional, but the deletion was compensated for by a timely and important public declaration by Mayor McClellan. At a dinner given to him at the Hamilton Club in Brooklyn on April 6, 1905, he said:

"I promise with all sincerity that is in me that if the bill is amended giving to the Mayor absolute and unqualified power of appointment I shall immediately on the enactment of the bill call upon the Chamber of Commerce of New York, the Board of Fire Underwriters and the Manufacturers' Association for a list of three names each, and from those names I shall appoint Commissioners, one from each list; and should any vacancies occur later during my administration, I shall fill those vacancies in the same manner as I shall appoint the original Commission. I want to make a precedent so strong and establish a tradition so binding that none of my successors can in any circumstances violate this tradition or precedent."*

This declaration had the desired effect. The bill passed the Assembly April 11 and in the last days of the session it passed the Senate. It became a law (chapter 724 of the laws of 1905) by the Governor's signature of June 3, 1905.

* Mayor Gaynor did not follow this precedent.

The last obstacle in the stony path of the movement was removed when, on November 7, 1905, by popular vote, the Constitution was amended by inserting in section 10 of article VIII a provision excepting from the constitutional debt limit of municipalities "debts incurred by the City of New York after the 1st day of January, 1904, . . . for the supply of water." This amendment went into effect January 1, 1906, but was retroactive to January 1, 1904.

Chapter 724 of the laws of 1905 provided that the Mayor should appoint three Commissioners to be called the Board of Water Supply. An unusual feature of the law, designed to secure continuity of administration, is that it prescribes no limit to the term of office of the Commissioners, who are not to be removed except for incompetency or misconduct. The Board chooses its own President, and any two of them constitute a quorum for the transaction of business. This Board was given power to appoint its own engineers, surveyors, and other employees; and was charged with its duty of ascertaining the most available sources of an additional water supply for the city of New York, its recommendations being subject to modification by the Board of Estimate and Apportionment. Upon the approval of its plans and after certain formalities concerning the filing of maps, etc., the Corporation Counsel was authorized to institute condemnation proceedings for the acquisition of the lands needed and the Board of Water Supply was authorized to build the aqueduct. By the terms of the act, the City of Kingston and any municipality in Westchester county may use water from the Catskill aqueduct, at the same rate of consumption per capita as New York City, upon payment to the city of New York at the same rate charged to New York City consumers.

On June 5, 1905, Mayor McClellan called Mr. Chadwick to his office and appointed him a Commissioner as from the Manufacturers' Association. Not then having the nominations of the Chamber of Commerce and Board of Fire Underwriters, the Mayor deferred appointments of the other two until June 9, on which date Mr. Chadwick was formally commissioned, with Mr. J. Edward Simmons of the Chamber of Commerce and Mr. Charles A. Shaw of the Board of Fire Underwriters.

The full list of the Commissioners who for twelve years have had this great responsibility of evolving a definite and comprehensive plan of water-supply and of carrying out that plan, is as follows, the Presidents of the Board being indicated by asterisks.

| Name | Appointed | Resigned |
|---|---|---|
| *J. Edward Simmons | June 9, 1905 | Jan. 28, 1908 |
| Charles N. Chadwick | June 9, 1905 | Incumbent |
| Charles A. Shaw | June 9, 1905 | Jan. 12, 1911 |
| *John A. Bensel | Jan. 30, 1908 | Dec. 31, 1910 |
| John F. Galvin | Jan. 23, 1911 | Incumbent |
| *Charles Strauss | Feb. 7, 1911 | Incumbent |

The Board spent two months in considering the plan and details of organization. Before the engineers could be appointed it was necessary to secure their exemption from civil service rules by the state and municipal Civil Service Commissions.

On July 7, 1905, Mr. John R. Freeman was appointed Consulting Engineer.

Mr. J. Waldo Smith was made Chief Engineer and assumed his duties August 1, 1905. The selection of Mr. Smith for this responsible position was extremely fortunate for the success of the undertaking. He had begun his engineering career twenty-seven years before, at the age of 17, as Chief Engineer of his home town of Lincoln, Mass.; and after having directed works of increasing importance in that and other states, had been Chief Engineer of the Aqueduct Commissioners of New York from 1903 to 1905, and had charge of the completion of the new Croton dam — the largest masonry dam in the world. He was therefore thoroughly familiar with the water problem of New York City. In his work on the Catskill aqueduct, he surrounded himself with very able men as executives and consultants, and directed the work with such skill as an engineer that every problem — and many were entirely new — was solved as it was encountered. In addition to his professional ability, he displayed remarkable tact. All of his associates became very fond of him personally, and their *esprit de corps* and loyalty contributed greatly to the success of this crowning work of his genius.

Mr. Charles R. Harrison was appointed Deputy Chief Engineer and was later succeeded in turn by Mr. Merritt H. Smith and

Mr. Alfred D. Flinn. On August 8, 1905, Prof. William H. Burr and Mr. Frederic P. Stearns were appointed Consulting Engineer, and some years later Messrs. Thaddeus Merriman, George G. Honness, Ralph N. Wheeler, Frank E. Winsor, Robert Ridgway, Carleton E. Davis and Walter E. Spear were appointed Department Engineers.

The organization at the present time is as follows:

*Commissioners*

Charles Strauss, President

Charles N. Chadwick — John F. Galvin

*Administration and Claims Bureaus*

George Featherstone, Secretary
Ralph T. Stanton, Asst. Secretary
Henry C. Buncke, Auditor
William S. Haupt, Chief Clerk
Walter LeC. Boyer, Chief of Bureau of Claims.

*Engineering Bureau*

J. Waldo Smith, Chief Engineer

Alfred D. Flinn, Deputy Chief Engr.
John R. Freeman, Consulting Engr.
William H. Burr, Consulting Engr.
Frederic P. Stearns, Consulting Engr.
Thaddeus Merriman, Department Engr.
George G. Honness, Department Engr.
Ralph N. Wheeler, Department Engr.
Walter E. Spear, Department Engr.

Prof. William O. Crosby, formerly of the Massachusetts Institute of Technology, Prof. Charles P. Berkey, Ph.D., of Columbia University, and Prof. James F. Kemp, Sc. D., LL.D., of Columbia University, were the experts on geological questions.

# CHAPTER II

## INCEPTION AND PROGRESS OF THE WORK

### A Commissioner's Narrative

By CHARLES N. CHADWICK, Member of the Board of Water Supply

[In the foregoing pages, we have given a condensed account, in the third person, of the history of the Catskill aqueduct up to the beginning of actual work of construction. In order that the reader may have the benefit of a first-hand account, direct from one of the most active makers of this history, we give herewith verbatim the story as narrated to the writer, at his special request, by the Hon. Charles N. Chadwick, one of the original members of the Board of Water Supply.]

"I am often asked how I 'got into water.'

"The story goes back many years to when, as a small boy, I listened to a conversation between my father and a fellow lawyer who had been reading DeTocqueville's 'Democracy in America,' and who, turning to my father, said, 'Dan, do you know the rock on which the American republic will split will be the solution of the municipal problem!'

"I thought no more of it until thirty years later when I was invited to attend the conference of manufacturers who laid the foundation of the Manufacturers' Association of Brooklyn. I found that a small group had planned the organization to argue anew the question of the tariff, and as I listened to the discussion upon the constitution and by-laws, the above conversation suddenly recurred to me. Immediately the idea emphasized itself in my mind that here might be the solution of the municipal problem. What DeTocqueville really said was:

"Nevertheless, I look upon the size of certain American cities, and especially upon the nature of their population, as a real danger which threatens the future security of the democratic republic of the new world, and I venture to predict that they will perish from this circumstance unless the government succeeds in creating an armed force which, while it remains under the control of the majority of the nation, will be independent of the town population and able to repress its excesses."

"The power of self-control as a factor in self-government was overlooked in this statement by DeTocqueville, nor did he antici-

pate that instead of armed force the solution of this question would lie in the evolution of the New England town meeting into municipal civic organizations and the influence those organizations would have upon the affairs of our civic commonwealth.

"At the same time I reflected that a municipality is a business corporation engaged in public house-keeping. It is the corporate home to be kept clean by intelligent supervision and honest service. I said to myself, 'Here is the opportunity and I will get busy.' I took an active part in the discussion and was elected one of the directors of the newly formed organization. Later I was made chairman of a banquet committee. I called a meeting of the committee, to which I said there was a future before this organization if we were willing to commit ourselves to the above proposition — that a municipality is a business corporation engaged in public housekeeping; that we could divide the subject in the form of toasts to be responded to by members of the association rather than by outside talent. Thus the addresses which were made at the banquet emphasized the various activities of the municipality and committed the Association to a policy which has been maintained ever since. Questions relating to finance, labor and capital, education, transportation, health, etc., were taken up from time to time and committees appointed to attend hearings before the various departments of the city, the State and at Washington. I was chairman of many of these committees, and when in 1895 and 1896 there was a water famine in Brooklyn a special committee on water was appointed on November 2, 1896, of which I was made chairman. The Ridgewood reservoir, which at one time contained 304 million gallons of water, was down to 60 million gallons, or only eight hours ahead of consumption, and if the pumping plant at Ridgewood had failed it would in only a few hours have resulted in great disaster.

"The Committee on Water of the Manufacturers' Association in 1896 took up immediately the study of that subject. It met weekly. There appeared before it city officials, engineers, experts representing the various uses of water, such as potable, sanitary, fire, commercial and industrial. Numerous documents, reports, communications and data of all kinds were carefully read and considered. It investigated the water supply of many cities in

this country and abroad, with particular attention to the development of the water system of the metropolitan district of New York. The committee found that report upon report had increased encyclopedic knowledge of the subject. A vast amount of wisdom had been evolved, but it remained to reduce that knowledge and wisdom to practice in order to secure continuity of plan and of administration in execution. The problem assumed two phases, first, present supply; second, future supply. The elements to be considered were quantity, quality and expense; but without an adequate quantity all else is futile, and the question resolved itself into this, so far as Brooklyn was concerned: If the future supply is not to be obtained from the Long Island watershed, how long can the present supply be kept unpolluted and furnished in sufficient quantity to meet the demand until a new supply can be obtained elsewhere.

" Thus, as the situation developed, the committee found numerous elements which had to be considered and settled before a report could be made. There had never been in New York a settled plan for developing a water supply. It had always been a political question conditioned upon changing administrations which in rotation demanded new commissioners. These had no sooner learned something of the duties of their office than they were compelled to retire and give place to others. The result of this was a hand-to-mouth policy. Thus the committee had also to face the question whether in the appointment of a commission it should be a political measure backed by either one of the great political parties, or whether it should be a non-partisan, business measure. It was decided that it ought to be a strictly business proposition; and for that reason it was thought best to wait for the endorsement of the civic bodies of the Greater New York. The evils of the hand-to-mouth policy are well expressed in the report of a former water commissioner (November 27, 1900):

" ' The writer has been prompted to discuss so fully the present situation and its causes from a strong conviction of the importance of fully exposing and demonstrating the danger and consequences of the narrow and mistaken course pursued for years in the management of our waterworks and the *imperative necessity of a radical and immediate change of policy.* The easy but fatal policy of delay and procrastination, supplemented as it must ever be in case of emergency by makeshifts and the costly and hazardous expedients, through which our citizens are purposely subjected to the hardships and loss resulting from an

inadequate supply, and the community thrown into a state of alarm, with untold damage to public and private interest, cannot be too severely condemned and should at once be discontinued.'' '

"And in the report of the Chief Engineer of the Department of Water of Brooklyn, January 15, 1896, there is the following statement:

" ' The time required for the careful study and construction of works of this magnitude, the still longer period often consumed in their discussion before adoption, the manifold evils resulting from a narrow treatment of this question' from the necessity in case of shortage of resorting to temporary expedients (of which we have so many trying instances in the history of this department), and the PARAMOUNT IMPORTANCE, FROM REASONS OF BROAD PUBLIC POLICY, OF SECURING A WATER SUPPLY UNCHALLENGED AT ALL TIMES BOTH AS TO QUALITY AND QUANTITY, militate against the consideration of a smaller proposition.'

"These two quotations show conclusively the condition which prevailed at this period, and the futility of the attempt of an administrative body holding office for a relatively short time to go outside of its own province into a work of permanent construction requiring continuity of plan and of administration for its successful completion.

"Then came the question of financing the work. It was found that to subtract a sufficiently large sum (at that time put down at $100,000,000) for an additional supply of water, would cripple the city and interfere with the normal activities of various departments, school, police, health, and so on. Within the time required, such a large sum of money could not be subtracted from the budget, and unless a sufficient amount could be provided the work could not be undertaken.

"Another point considered was that it was too large an undertaking for the city of Brooklyn, but must contemplate the Greater New York, thus involving the consideration of a plan that should contemplate a long period of years, in order that each detail of the work as completed might be in harmony with the plan of the whole.

"Our investigation covered a period of about four months and found us with an accumulation of stenographic notes, reports and data which had to be disgested and formulated into a general report. This I undertook to do for the committee, and on March 15, 1897, submitted my report, which was signed by the committee. This report made eight recommendations:

"*For the present supply:*

"(1) The development to the fullest practicable extent of the present system for an immediate supply.

"(2) Protection from pollution by the control and direction of the sewerage of villages.

"(3) The immediate establishment of a chemical department for the daily analysis of all supplies — *as an anticipatory rather than a remedial measure.*

"(4) The adoption of meters to control the excessive use of water, the same to be supplied free and controlled by the city, but the charge for the consumption of water to be borne by the consumer, and so regulated that only a nominal charge be made for a liberal estimate for necessary use — say, 60 gallons per day per capita — any excess thereof to be charged for at such reasonable rate as may be determined; but under no consideration was the introduction of meters to be to the detriment of the health of the city, nor a barrier to the free and unlimited use of water for household purposes, bathing, sanitation, etc.

"*For the future supply:*

"(1) That all plans for water should contemplate a Greater New York.

"(2) That to finance it it was necessary to amend the Constitution of the State of New York, to separate the water debt from the constitutional debt limit.

"(3) That it should be a business administration, free from politics, and that to secure continuity of plan and continuity of administration a commission should be appointed to have charge of the work from start to finish.

"(4) That the development of the water supply should contemplate a period of fifty years, in order that it might be worked out economically and in harmony with the general plan.

"These were the fundamental propositions made in this report of March 15, 1897. There followed, during a period of eight years, a campaign to enlist the support of the civic bodies and of the public. It meant practically a single-handed fight involving

reports, interviews and persuasion. It encountered from the public apathy, indifference and antagonism, but finally received the united support of all the great civic bodies.

"Early in 1904 invitations were sent out at my request from the City Club of New York to the Chamber of Commerce of the State of New York, the Merchants' Association of New York, and other prominent civic bodies, to meet and confer on the subject. At this conference held at the City Club on June 9th, there were present representatives of twelve civic bodies. The necessity of getting down to practical work, formulating a plan and creating a commission to be in control from start to finish was agreed upon, and from that time the work has received the loyal, faithful, intelligent and efficient support, through all times of stress and trouble, of the great civic bodies of New York. Without this support the original bill could not have been put through the legislature.

"During the years 1901, 1902, 1903 and 1904, successively, the committee of the Manufacturers' Association introduced bills in the legislature for the creation of a commission. The first bill was introduced in April, 1901, near the close of the legislative session, and I was asked how I expected the bill to pass when introduced so late. I replied that this was the matriculation of the bill, that the baccalaureate degree would follow in four years. And it did. In July, 1904, a communication was addressed to the Hon. George B. McClellan, Mayor, and Chairman of the Board of Estimate and Apportionment, signed by representatives of the civic bodies, calling attention to the city's dire need and reciting the steps that had been taken to bring about action by the official bodies. Mayor McClellan became actively interested in the movement, and on January 3, 1905, the bill almost in the form as finally passed was introduced into the legislature providing for the appointment of a commission of three.

"Governor Higgins did not at first regard the measure favorably, as he was an advocate of the development of all the water resources of the State under State auspices. On February 16, 1905, I went to Albany and saw the Governor by appointment, explained the situation, removed the Governor's objections and secured his endorsement of the general provisions of the bill, and

in his emergency message of February 20, 1905, Governor Higgins gave his earnest support to the bill, which was passed on June 3, 1905, and on June 9, 1905, the commission was appointed by the Mayor.

"The recital of these steps covering a period of eight years, shows how long it takes and how difficult it is to overcome apathy, to remove antagonism and to enlist sufficient support before public sentiment crystallizes into action and a great constructive work can be put upon its feet.

"Immediately after appointment the Board of Water Supply organized. A city of four million inhabitants had practically reached the limit of its resources for water. Numerous administrations had attempted to solve the problem. There was a vast amount of data and many reports to be reduced to practice. The Board had to determine the source of supply from which water was to be taken, to create the colossal organization to carry on the work, and to attend to the thousand and one details involved in shaping that great business enterprise whose purpose was to satisfy the need for water in the five boroughs of the Greater New York by adding a supply of 500 million gallons a day.

"It was realized at the very beginning that there were certain fundamental policies to be determined upon. They were unity of organization, thoroughness, efficiency, economy, continuity of plan, and speed. When the Chief Engineer was appointed, I asked him if he could have a map, plan and estimate of cost of the *complete project* ready by the middle of October. He replied, 'I can, and I will,' and exactly four months after its appointment, on October 9, 1905, the Board of Water Supply submitted to the Board of Estimate and Apportionment, for its approval, a complete map, plan and estimate of cost for obtaining water from the Esopus, the Rondout, the Catskill and the Schoharie watersheds, setting a standard of speed which has been continuously maintained. It proposed to deliver 500 million gallons a day in two instalments, the first instalment of 250 million gallons a day (which is now being delivered) from the Esopus watershed, and the second instalment from the Schoharie watershed. The estimated cost for this work for the twenty years' time, including tunnel under the Island of Manhattan, was $177,000,000.

" The first sod was turned by Mayor McClellan, near Peekskill, New York, on June 20, 1907, and ten years later, on August 1, 1917, the completed aqueduct and reservoirs, with the exception of the one to be built at Gilboa for the development of the Schoharie watershed, were turned over to the city and the water officially delivered into the five boroughs, actual delivery of water having been made for some time previously.

" It became apparent that if the commissioners were to be masters of the work and use the organization, whether administrative or engineering, rather than let the organization use them, it was necessary that there should be a complete system of checks, and that all questions of importance should be worked out through the medium of written reports. This suggested the organization of a committee of the whole composed of the commissioners, to which matters of importance could be referred before formal action was taken, particularly those relating to the awarding of contracts. This method has been of great value, for each contract received at the time full investigation, including an examination of the financial standing, plant, capital, organization and experience of the contractor.

" The examination of the standing and resources of the bidders on the 140 contracts has been conducted by myself, and stenographic notes of my interviews with the contractors put on file with the reports of the Chief Engineer, Consulting Engineers, and such other information as was available, so that at any time reference to this record could be made, enabling the commissioners to refresh their recollection and meet any criticism which might arise regarding that particular transaction.

" There were two points upon which I insisted in the opening of the books: First, clearness; second, everything to be put down under proper headings so that there should be no concealment whatsoever. If mistakes occurred, through error or lack of judgment, involving the expediture of money, they should appear for all time. There should be no concealment. The books have been so kept that at any moment every expenditure for any purpose can be traced down to the final cent and the exact date, and our system of book-keeping has been accepted as a model of municipal recording.

"At the very beginning I was interested in endeavoring to solve the problem of contentment and efficiency on the part of our engineering force. To that end we arranged for a clubhouse and secured from the public libraries of Brooklyn and New York books for circulation among the engineers. So far as physical conditions were concerned, the contracts were carefully drawn to provide for a reasonable degree of home comfort in the building of suitable houses, a supply of drinking water, sewerage, septic tanks, incinerators, policing, and rules and regulations controlling same. But to secure as nearly as possible 100 per cent. of efficiency it was necessary to take into consideration not only physical conditions, but some form of mental employment which would reasonably occupy the time of laborers when not at work. This suggested the idea of camp schools for men and kindergartens for little children, in addition to the regular public schools. It was found that under the Act there was no provision for the maintenance and support of such schools, and it became necessary to raise the money from outside sources. To this end we interested the Society for Italian Immigrants. Dr. Jane E. Robbins, Chairman of the Camp School Committee, was given direct oversight of the Society's educational work on the reservation, and Miss Sarah W. Moore was made superintendent of camp schools.

"The first contribution for this purpose was made at Lake Mohonk, in response to an address which I made on August 26, 1908. To this was added contributions from Mayor McClellan, from the commissioners of the Board of Water Supply, the engineers, and others. To the support of the work the Italian Government has given substantial aid, and at Valhalla the North American Civic League has supported the school. The workmen in these schools are taught to read and to write the English language and are given some knowledge of the laws and institutions of the country, gradually developing their knowledge of municipal, State and federal government, with the rights of person and property. This goes to the root of the immigration problem, showing the men the advantages of becoming good, law-abiding citizens.

"The work of the Board of Water Supply is being done under the eight-hour law, and it is believed that if a man's time is properly employed during his hours of recreation, he will be more

likely to put in eight hours of real work in his working day. Through the medium of a common language misunderstandings between the employer and employee have been done away with, and this undoubtedly has been a factor in the fact that there has never been a strike on the work of the Board of Water Supply. The situation may be summed up thus in connection with administration, engineering and other problems: The *human* side of the workman has been considered. In addition to this, each individual in the administrative and engineering bureaus has recognized a certain freedom which has stimulated him to take the initiative in the work of his particular department, with a sense of responsibility and with energy, faithfulness and efficiency for the good of the whole, the result of which has developed the wonderful *esprit de corps* of the organization. This example has resulted in an act by the Legislature of New York requiring municipalities engaged in construction work to establish and maintain 'camp schools' for men.

"Engineering is both the spectacular and the real part of the work, but behind it and underneath it is the great big business proposition of administration, entering into the fields of legislation, law, and business. On the scientific side, questions of geology, filtration, aeration, hydraulic engineering, are some of the problems the Board of Water Supply has had to solve in the twelve years of its existence.

"At this time it is difficult to understand why at the beginning of the work the necessity for speed in the delivery of water from the Catskill mountains was imperative. While the reservoirs and the aqueduct have been built to the full capacity of 500 million gallons a day, we are only taking the Esopus normal supply of 250 million gallons daily, leaving the remaining 250 million gallons daily to be diverted from the Schoharie watershed, contracts for which have been let.

"The Department of Water Supply, Gas and Electricity is using of Catskill water at the present time 350 to 450 million gallons daily, drawing down the storage capacity of the Ashokan reservoir, and there is danger, if this is continued, of a drought, compelling the return to pumping. (The saving from public pumping alone is to-day about $2,000,000 a year, and nearly as much more for private pumping.) So far as the consumer is

concerned, there is apparently no need just now of more water, but we have only to go back to water scarcity in the year 1911, also 1909, and the actual famine of 1896 to find the reason for speed. The Board's forces in the early years of the work were putting in, not an eight-hour day, but constant overtime, frequently working all night. It was this tremendous pressure of existing conditions, thoroughly understood by the commissioners and the chief engineer, which brought about the rapid prosecution of the work, and has enabled the Board of Water Supply to complete the first stage of its work within the estimated time and below the estimate of cost.

"A municipality's greatest asset, both from a sanitary and financial point of view, is water. This fact is little understood or considered by the public. To turn the faucet and let the water run means nothing beyond the immediate satisfaction of need. Some years ago a delegation of Indians from Arizona was entertained in New York. When leaving they were asked what had impressed them most of all the sights they had seen. The answer was, 'When the faucet is turned the water runs.' The problem is also a continuous one, conditioned upon the growth of population. Foresight, vision, imagination, administrative ability, engineering skill, and honest labor are the factors in its solution. No sooner is one development completed than another must be anticipated and taken up for consideration. All this has been comprehended for centuries and worked out by the great cities of the world. Ever since the days when King Hezekiah, over three thousand years ago (as related in the book of Second Chronicles of the Bible), 'stopped the upper water course of Gihon and brought it straight down to the west side of the City of David,' down to the present time, it has been a habit of far-seeing people to plan ahead for their water supply. Frontinus, commissioner of water of the city of Rome, in his report written in the year 97 A. D., tells of the building of the Roman aqueducts, covering a period of 363 years — from 313 B. C. to 50 A. D. That is, Rome built her aqueducts at intervals as the population increased, always anticipating the delivery of water as it was needed. When her population was one million people they consumed about 300 gallons per capita per day. Compare this with the present day consumption of New York City of about 100 gallons per capita

per day. This city has never been and is not now an extravagant user of water; in fact, the consumption of water in New York is less than that of other cities of the first class of the United States. Buffalo is credited with using 310 gallons per capita per day; Pittsburgh, 236 gallons; Philadelphia, 200 gallons; Chicago, 199 gallons; Detroit, 185 gallons; Baltimore, 128 gallons, and Boston 126 gallons.

"In communities which develop into cities, the growing demand is for a supply of pure and wholesome water. New York City is illustrative of this. Old wells, particularly the famous 'Tea Well,' satisfied the needs of the smaller community. As the population grew, water was delivered throughout the city in hogsheads and sold for two cents a gallon, whereas it now costs about half a cent for 100 gallons. In 1837 a dam was built across the Croton River, and the construction of the first aqueduct, with a capacity of 80 million gallons a day, was begun. It was completed in 1842, and later the new Croton aqueduct followed, with a capacity of 300 million gallons a day. In 1856 the Ridgewood system in Brooklyn was developed by pumping water out of the sands of Long Island into the Ridgewood reservoir and delivering it by gravity into mains.

"The watersheds of the Croton and the Catskill are supplying New York City to-day. There is in reserve the old Brooklyn watershed, the possibilities of the underlying waters of Long Island in Suffolk County, and the Adirondacks.

"Water enters so largely into the life and industry of the city that constant care must be given to its protection and conservation. It is a reasonable expectation that the time will come when, with the rapidly increasing population of the Greater New York, of the metropolitan district of Westchester county, and of the Hudson River towns and villages, there will be a population of at least twenty million people on the eastern slopes of the Appalachian range in New York State, and in the orderely development of an increasing water supply for such a great body of people, the final step will be of necessity the Adirondacks. The potable supply of that great watershed must be conserved and protected by New York States for the use of future generations. To part with this for any other purpose would be a careless gift of a priceless possession."

# CHAPTER III

## THE CONSTRUCTION OF THE AQUEDUCT

### The Catskill Mountains

And now, to quote "The Pilgrim's Progress," "they came to the Delectable Mountains." With the aid of previous studies, it did not take the Board long to determine the general question of the source from which the water was to be obtained, and exactly four months after its appointment, the Board recommended to the Board of Estimate and Apportionment a plan for taking water from the watersheds in the Catskill mountains and foot-hills tributary to the Catskill, Schoharie, Esopus and Rondout creeks. The Rondout watershed, embracing an area of 131 square miles, begins about seventy-five miles in an air line from New York City Hall. The Esopus watershed, containing about 255 square miles, lies next to the northward; the Schoharie, 315 square miles, next; and the Catskill, 163 square miles, farthest north, its northernmost boundary being about 130 miles from City Hall.

The Catskill mountains in which these watersheds lie are an excellent illustration of the mechanical agency of water referred to in the opening chapter. In the Middle and Upper Devonic periods of Palaeozoic time, perhaps 43,000,000 years ago,* when all the interior of New York State and much of the continent was submerged under the sea, the sandstones and shales of the Catskills were formed by particles and fragments of ancient rock washed from adjacent heights and deposited on the shore and bottom of the Devonian sea. In the lapse of these millions of years, there has been a gradual elevation of the land surface,—

* Geologists do not reckon geological time by years, but by periods, characterized by certain forms of rocks and evidences of life. The above rough estimate of the age of the Catskills is based on Lord Kelvin's estimate of 100,000,000 years of elapsed time since the Archaean, and Dana's ratios of the different periods.

probably several alternate elevations and depressions, which, as their net result, lifted the ancient seashore and sea-bottom in a great plateau several thousand feet above sea-level. As it emerged, the rains, aided somewhat by the winds, and later the glaciers, began to wear it down and carved it ultimately into the shapes which we now call mountains. The highest of these, Hunter mountain, is 4,025 feet high, although it was once much higher, and we can recognize on these high mountain-tops the sands of the ancient sea-shore.

### Preliminary Explorations

Having selected the general source of the water supply, it was necessary to determine the route of the aqueduct, the location of the reservoirs, and the general character of the works to be constructed. The work was divided into five departments, namely, the Departments of Reservoirs, North Aqueduct (from Ashokan to Peekskill), South Aqueduct (from Peekskill to New York City), City Tunnel, and Headquarters, in charge of department engineers. The Chief Engineer over the whole work was Mr. J. Waldo Smith.

The survey covered about 3,000 miles before the line of 92 miles between the Ashokan reservoir and the city line was determined. Additional surveys and explorations were necessary to locate the 28 miles of tunnel in the bed rock in the city itself. It was decided at the outset not to build the aqueduct anywhere on structures above ground. There were to be no picturesque arcades of masonry like the Roman aqueducts or the Harlem river High bridge. Bridges were to be only for highway purposes. The aqueduct itself was to be underground, for safety. Rivers and valleys, therefore, had to be crossed by inverted siphons passing under them, and as the pressure of water at low depths is enormous, these siphons and certain other parts of the aqueduct had to be built in solid rock; and to determine the subterranean rock conditions, hundreds of borings were made with a diamond drill. The diamond drill used was a hollow cylindrical steep pipe, 1¾ inches in diameter, in the end of which were set seven black diamonds. Each diamond was valued at about $100, making the diamonds alone worth $700 in each drill. In the operation,

a pipe somewhat larger than the drill was first driven down through the top soil to the rock. The drill was then let down in the pipe, lengths being added to the drill as required, until the end with the diamonds rested on the rock. The drill was then revolved by machinery, cutting down through the rock somewhat as an apple-corer cuts through an apple, leaving a core of rock inside the drill. Occasionally the drills were pulled up and the rock cores removed, labeled and carefully saved for study. The cores came out in fragments varying in length from a few inches to ten feet, and their aggregate length exceeded 25 miles. They constitute a distinct contribution to geological science generally. Every phase of the work was done under the supervision of three experts in geology, namely, Prof. William O. Crosby, formerly of the Massachusetts Institute of Technology, Prof. Charles P. Berkey, Ph. D., of Columbia University,* and Prof. James F. Kemp, Sc. D., LL. D., of Columbia University. The information furnished by the studies and reports of these experts concerning the rock-cores enabled the engineers to know where to locate the rock tunnels in rock strong enough to resist the bursting pressure of the water, how deep to sink their shafts, etc.

### The Ashokan Reservoir

Although the experimental shaft at the Storm King end of the siphon under the Hudson river was begun February 23, 1907, the work of construction dates officially from June 20, 1907, on which day Mayor George B. McClellan turned the first sod, with appropriate ceremonies, near Indian creek and Garrison road in Phillipstown, about midway between Cold Spring and Garrison.

The work of construction proceeded simultaneously on several different parts of the aqueduct; and for convenience of descrip-

* A very able and intensely interesting presentation of the geological problems encountered and solved in the construction of the Catskill aqueduct is to be found in Bulletin No. 146 of the New York State Museum, by Charles P. Berkey of Columbia University, Special Geologist of the New York State Geological Survey and Consulting Geologist of the New York City Board of Water Supply. It is entitled "Geology of the New York City (Catskill) Aqueduct. Studies in Applied Geology covering problems encountered in explorations along the line of the aqueduct from the Catskill mountains to New York City." It comprises 283 pages and 32 plates. It cannot be summarized in these pages in justice to Dr. Berkey.

tion, we will follow the geographical rather than the chronological order, beginning at the Catskills and proceeding southward.

Of the four Catskill watersheds which we have mentioned, it was decided to develop first the Esopus watershed, capable of supplying 250,000,000 gallons of water a day, but to build the aqueduct with a capacity of 500,000,000 gallons a day, and to develop the other watersheds as needed. The Esopus development has been completed and the work on the Schoharie watershed, which is expected to supply the second 250,000,000 gallons a day, is now in progress.

In looking around for a suitable place for the storage reservoir of the Esopus watershed, a site was found about eleven miles west-northwest of the City of Kingston in a portion of the Esopus valley which in pre-glacial times was probably a lake. In the glacial period, the lower side of this lake was ground down by the ice-sheet and the lake was emptied into Esopus creek. By throwing a dam across the Esopus creek at Olive Bridge the engineers found they could re-create this ancient lake for New York City's water-supply. This site, embracing about 15,000 acres, was therefore selected,— 10,000 acres being for the water area and 5000 acres for the marginal reservation. Within this area were nine villages with private houses, boarding houses, stores, churches, school houses, and all the activities of country life. The villages were West Hurley, Ashton, Glenford, Brown Station, Olive Bridge, Brodhead, Shokan, West Shokan and Boiceville. The oldest of these village names, Shokan, is an abbreviation of the Indian place-name Ashokan,* which latter is very appropriately preserved in the name of the reservoir built on this site. There were also 32 cemeteries, containing over 2800 graves, some dating back over 200 years. It was necessary to acquire all this land, remove the villages and cemeteries, re-locate 11 miles of the Ulster & Delaware railroad track, discontinue 64 miles of old highways, build 40 miles of new highways and construct 10 highway bridges, to make way for the reservoir. Some

* In the Marbletown records of 1677 this name is spelled Shokaken. In "Aboriginal Place Names of New York," published by the New York State Museum, it is stated that the name may be derived from "chogan," meaning "black-bird," or, preferably, from "sokan," meaning "to cross the creek."

of the property involved was purchased by agreement; but the prices asked in most cases were so exorbitant that most of the area was secured by condemnation proceedings. One man, who formerly owned a boarding-house which was condemned, complained bitterly after he had spent the money received for his house and had neither house nor money left. Being asked if he had not been compensated for it, he replied in the affirmative, but said he had lost his business and he wished the City of New York had never come. Most of the former inhabitants went to Kingston and the others scattered to the four winds.

The problem of the cemeteries was a serious one because of the sentiment attaching to them. The owners of the cemetery lots were paid for their land and fences, and were given a suitable allowance for the expense of removing the bodies and for new headstones; and were given two years in which to vacate. An evidence of the transitoriness of human life or the indifference of the living generation to the memory of their ancestors is afforded by the fact that the relatives of many of those buried in the cemeteries had either died, could not be found, or took no pains to transfer the bodies in the cemeteries, and after the two-year notice had expired the bodies which remained were removed by contract and reverently reinterred in other cemeteries.

The ground having been cleared, the engineers built across the Esopus creek a dam which created a reservoir 12 miles long from east to west and from 1 to 3 miles wide, covering about 10,000 acres with water which at its deepest place near the dam is 190 feet deep but which on the average is 50 feet deep. It has a shore line of 40 miles and a storage capacity of 132,000,000,000 gallons, or enough water to cover Manhattan Island 30 feet deep. This dam, built of cyclopean masonry — that is, great boulders laid in a solid bed of concrete — is 240 feet high, 190 feet thick at the base, and 1,000 feet long. With wings on each side, each consisting of a core wall covered by an embankment, the total length of the dam is nearly one mile from hill to hill. In addition to this dam, a dike about five miles long is built along the south line of the reservoir. (See plates 12–16.)

The dike has a concrete core going down to rock, and is banked with earth which was wet and rolled as every six inches of height

was added, making a solid mass through which water cannot pass. This dike is so compact that a cubic foot of it weighs 150 pounds, only 20 pounds less than a cubic foot of granite. There are several other dikes at low depressions around the reservoir on the east end, while on the north and west are the Catskill peaks, so that there is now another large lake where its pre-glacial predecessor once lay.

At the extreme east end of the reservoir there is a concrete spillway over which the excess water escapes and flows down through a valley to the Esopus creek.

The reservoir is divided by an embankment called the dividing weir into two parts, called the East basin and the West basin, from either of which the water can be allowed to flow through the gatehouse into the aqueduct. Crossing the reservoir on the dividing weir is the Ashokan bridge, built of reinforced concrete. The bridge is 1,120 feet long, and has 15 arches of 67½ foot span.

Another notable bridge is at Travers Hollow. It is a three-hinged arch bridge of 200-foot span.

In planning this reservoir, very careful attention was given to the subject of the purity and taste of the water. When a reservoir of potable water is built on ground covered with vegetable mould, it is usually considered desirable to remove the top soil to prevent the harmless but disagreeable tastes and odors which minute vegetable organisms give to the water at certain seasons. Such an operation at Ashokan reservoir would have cost five and a quarter million dollars. But as the bottom of the reservoir was principally rock and peat, the engineers decided that they could attain the same result at less expense by building an aeration plant. This consists of a small reservoir, 500 feet long and 250 feet wide, on the bottom of which are laid water pipes four or five feet apart. At intervals of five or six feet in each pipe are nozzles, through which the water, under pressure, rises into the air in jets from 40 to 60 feet high and falls back into the reservoir as spray. The mixture of air with the water in this process causes oxidation of the vegetable organisms and removes the tastes and odors. This water garden forms an attractive feature of the landscape treatment of the reservoir site. Set among thousands of evergreen and deciduous trees and surrounded and crossed by forty

miles of wonderful highways and bridges, Ashokan reservoir presents a scene of landscape beauty which is pronounced by those familiar with European scenery to rival the lakes of Switzerland. (See plate 17.)

### Humanitarian Work

As the work on the various parts of the aqueduct progressed, men were employed in increasing numbers until as many as 17,243 were at work at one time on the entire line. Comparing the Catskill aqueduct with the Roman aqueducts again, it is interesting to contrast the treatment of these workmen with that of the Romans. The Roman workmen were slaves. The Catskill aqueduct workmen were freemen in the fullest sense of the word. Although a large proportion of them were Italians, the padrone system was completely eliminated and the men and their families were so well cared for that there was not a single labor strike during the whole ten years during which the aqueduct was being built. The Board of Water Supply inserted in all contracts provisions requiring stringent sanitary precautions for the health of employees, local communities in the neighborhood of the aqueduct and people using water from the drainage areas upon which the work was being conducted. Ample supplies of wholesome water and good food, comfortable housing and careful sanitary conditions for the employees, were also insisted upon, and employees violating the sanitary regulations were discharged. At places where particularly large numbers of workmen were concentrated, still further care was taken for the welfare of the workmen.

As an illustration may be cited the camp at Ashokan reservoir. Here 3,000 men lived with their families near the work in a camp built by the contractors under the supervision of the Board of Water Supply. The maximum population here was 4,500. The camp was laid out with streets, and the negroes, Italians and other white employees were separated into different quarters. Good dwellings, generally of wood, one-story high, with screens on all doors and windows, were built and there was a special sewage disposal plant. Electric lights, telephones, a savings bank, a general store, a bakery, a hospital, police and fire protection, a post-office, a kindergarten and school for children, churches, and a Young Men's Christian Association also provided for the material

and moral welfare of the workmen and their families. There were smaller camps at other places, notably at Valhalla, near Kensico reservoir, but the same humanitarian spirit pervaded all.

One interesting branch of the work in these camps was the camp-schools for grown men and kindergartens for children, which were in addition to the regular public schools for children, and which were supported by private philanthropy. Commissioner Charles N. Chadwick started this movement by an address at Lake Mohonk on August 26, 1908, after which Mr. Albert Smiley took up a collection. This was supplemented by contributions by the Commissioners of the Board of Water Supply, the engineers, Mayor McClellan, and others. Valuable co-operation was given by the Italian Government, the Society for Italian Immigrants, the American Civic League, and similar organizations. Miss Anne Morgan was one of several prominent women who supported the movement. Other women who lent practical aid, as supervisors or teachers, were Dr. Jane E. Robbins, Miss Sarah W. Moore, Miss Anne Young, Miss Kennedy and Mrs. A. E. Talbot. Besides the classes of instruction these schools provided medical attendance, gymnasium classes, moving pictures, dances, foreign and American newspapers, libraries, story-telling for children, old-fashioned games (but not cards), etc., for the welfare and happiness of the camp communities, all free of charge.

The result of all these wise provisions for adults and children was reflected in both the health and general morale of employees and their families. The death rate among them, exclusive of accidents, was only 3.5 per thousand.

The reason for the camp schools for men was that under the restrictions of the 8-hour law, to secure as nearly as possible 100 per cent. of efficiency, it was necessary to take into consideration not only physical conditions but also some field of mental activity and employment that would reasonably occupy the laborer when he was not at work. This suggested what are called camp schools for grown men. As there was no provision under the act for the support and maintenance of such schools, it became necessary to raise the money from outside sources. The workmen in these schools were taught to read and write the English language, and incidentally were given some knowledge of the laws and institu-

tions of the country. The work of pointing out to the men of foreign extraction the advantages of becoming good and law-abiding citizens was aimed at the root of the immigration problem. It was also believed that if the men's time were properly employed during the recreation hours they would pay closer attention to their work during their eight hours of labor. Through the medium of a common language, a prolific source of misunderstanding between employer and employees was done away with. All these things contributed to the completion of the work without a strike. The situation in connection with the administration, engineering, construction and other problems may be summarized in the one statement that the human side of the workmen was considered.

### The Five Types of Aqueduct Construction

The aqueduct which conveys the water from the Ashokan reservoir to the City of New York is of five different types of construction, namely, cut-and-cover, grade tunnel, pressure tunnel, steel pipe siphon and flexible-jointed pipe siphon — the latter being used only at one place, namely, across the Narrows of New York harbor. (See plates 18, 19, 20, 23.)

The term "cut-and-cover" is used to describe that type of aqueduct which is built by cutting a trench in the surface of the ground, laying the conduit in the trench, and covering it with earth. In section it is horse-shoe shaped with a slightly curved bottom called the "invert" and a high arched top. The interior diameter is 17 feet 6 inches wide and 17 feet high. The conduit is made of concrete, varying in thickness from one foot at the top and bottom to five feet at the bottom of the arch. This is the least difficult and least expensive type, and has been used wherever the elevation and nature of the land permitted, where the grades are comparatively moderate, and therefore where the bursting pressure of the water is not great. The gradient of the cut-and-cover tunnel is about one foot to the mile. An aggregate of fifty-five miles of the aqueduct is of this type. Most of the old aqueducts which supplied the City of Rome were built by the cut-and-cover method, although the Roman conduits were made generally of stone or brick, lined with concrete. (See plate 20.)

Grade tunnels were driven through hills and mountains where it would have been impracticable or uneconomical to circumvent them by the cut-and-cover method. They followed the general grade of the aqueduct, but had a gradient of about two feet to the mile. They are also horse-shoe shaped, and the same height as the cut-and-cover type, namely, 17 feet, but are narrower, being only 13 feet 4 inches wide. In explanation of the smaller diameter of the grade tunnel, and the still smaller diameter of the pressure tunnel mentioned hereafter, it may be explained for the benefit of those not familiar with hydraulics, that by increasing the "head" or the rate of descent, the same amount of water can pass through a conduit of smaller size in the same time that it would take to pass through the larger. By a comparison of cost between "head" and excavation, it was found to be cheaper at certain places to increase the gradient and to decrease the calibre of the tunnel than to continue the lesser gradient and larger diameter. The grade tunnels are built of concrete, which solidly fills all the space between the inner surface of the conduit and the rock through which the tunnels are blasted. There are 24 of these grade tunnels, aggregating 14 miles in length. (See plate 19.)

Pressure tunnels were built where it was necessary to pass under broad valleys and deep rivers, and in the City of New York, and where suitable rock could be found through which to build them. It may be stated in passing that all rock is not suitable rock for an aqueduct tunnel, for it is impracticable to construct through disintegrated and badly fissured rock a tunnel which has to stand great bursting pressure due to the depth of the tunnel below the initial level of the water. The pressure tunnels are circular in form, built of concrete and are generally 14½ feet in diameter in those portions north of New York City. The city tunnel begins with a diameter of 15 feet which is gradually reduced as it goes southward to 11 feet. There are seven pressure tunnels aggregating 17 miles in length north of the city, and the city tunnel is 18 miles long, being the longest tunnel in the world for carrying water under pressure or for any other purpose. The normal gradient of the pressure tunnels is about three feet to the mile. (See plate 18.)

Wonderful skill was shown by the aqueduct builders in constructing the grade and pressure tunnels. The marvelous precision of the engineers in the single matter of surveying may be illustrated by a comparison with the old Romans. When the Aqua Claudia was being built in the first century, the Romans decided to drive a tunnel three miles long through Mount Affliano. Their chief engineer set the line for the tunnel and put two parties of men at work, one at each end, to tunnel toward each other, in the expectation of meeting in the middle of the mountain. While they were thus at work, the chief engineer was captured by bandits and held a prisoner for a long time. When he was released and went to see how the tunnel was progressing, he found that the two working parties had passed each other and did not know it. He said that if he had not discovered their error in time they would have had two tunnels instead of one. In contrast with this experience may be mentioned two typical examples of Catskill aqueduct engineering. In crossing the Hudson river at Storm King, two parties of workmen on opposite sides of the river, over three-fifths of a mile apart, bored vertically down to a depth of 1,114 feet below sea-level, then started toward each other, and met under midstream with the variation of not more than half an inch. In building the Bonticou grade tunnel through the mountain between the Rondout and Walkill creeks on the west side of the Hudson two parties started from opposite directions and met under Bonticou mountain with equal precision, each having worked a distance of about 3,500 feet, or a total distance of over a mile and a quarter. Such feats, repeated many times, were not so difficult as overcoming the many new and unforeseen problems presented by unexpected geological conditions, illustrations of which will be mentioned hereafter.

The fourth principal type of construction is the steel-pipe siphon. This form of construction is used to pass under valleys where the rock is not sound and where for other reasons pressure tunnels would be impracticable. Each siphon consists of three cylindrical steel pipes from 9 feet to 11 feet in diameter made of plates varying from 7/16 to ¾ of an inch thick riveted together. They are lined with two inches of cement mortar and are enveloped with concrete. Only one of the three pipes of each siphon

has been laid thus far, the others not being needed at present. There are 14 steel-pipe siphons, aggregating 6 miles in length. They are not true siphons but are so-called because of their resemblance in shape to an inverted siphon. The Romans knew the principle of the inverted siphon, but, not having cast iron and steel, were unable to employ it on their main aqueducts. The best they could do was to use small lead pipes as inverted siphons in their distribution system.

The fifth type of Catskill aqueduct construction is the flexible pipe-line across the Narrows of New York harbor, an ingenious invention which will be more fully described hereafter. It is nearly two miles long.

About eight miles of by-pass and miscellaneous construction brings the total length of the aqueduct at present up to about 120 miles. About 18 miles more of tunnel will be built north of Ashokan reservoir under the Shandaken mountains to bring the Schoharie water into the Ashokan reservoir.

### From Ashokan Reservoir to Hudson River

When the Ashokan reservoir is full, the surface of the water is 590 feet above tide level. Through the gate chamber at the dividing weir of the reservoir the water is let down to the aqueduct proper which begins at the level of 492 feet. The first mile of aqueduct, constituting the "headworks," is mostly of the cut-and-cover form of construction. The general direction of this and succeeding portions, until otherwise stated, is southeastward.

For about two-fifths of a mile from the headworks, the aqueduct drops down about 120 feet in order to pass under Esopus creek by means of an inverted siphon, coming up again to about the same level of 492 feet on the other side of the creek. Three-fifths of a mile of cut-and-cover brings it to Tongore creek, under which it passes by an inverted siphon about 80 feet deep. It then runs 4½ miles, by cut-and-cover, through the Esopus valley to Peak Mountain, a formation of Hamilton shale, through which it passes by means of grade tunnel about five-eighths of a mile long. A mile and a half more of cut-and-cover brings it to the great Rondout siphon.

The Rondout siphon is not a steel pipe siphon but a pressure tunnel, 14½ feet in diameter. It is 4½ miles long between the down-take and up-take shafts, and descends from an elevation of 478 feet to a point 249 feet below sea-level — a drop of 727 feet — in order to pass under the Rondout creek and valley. Between the down-take and up-take shafts, six construction shafts were sunk in order that construction parties might tunnel in both directions and thus expedite the work. At shaft 4 a peculiar condition was met. Here the workmen encountered fissures through which 2,000 gallons of water a minute leaked into the tunnel and greatly inconvenienced the work. The trouble was aggravated by a sulphuric condition which gave a bad taste to the water and so permeated the air that it irritated the eyes and lungs. The problem was ingeniously solved by boring around the crevices and filling them with concrete. The excavation of this tunnel also revealed violent folding of the rock strata. The intake shaft passes down through Hamilton shale to Marcellus shale, then the tunnel passes horizontally through Marcellus shale. Binnewater sandstone, High Falls shale, Shawangunk grit, Hudson river shale, Shawangunk grit again, and again through Hudson river shale. The Shawangunk grit was particularly unfavorable for tunnel construction, and necessitated going down to greater depth in order to avoid it as far as possible. Twelve different kinds of rock were found. Some was limestone and in many cases the drills penetrated limestone caves of unknown depth and were lost. Rock weakness was developed in one locality in the Rondout tunnel, and it was counteracted by reinforcing the lining for a short distance with an interlining made up of steel channel rings, welded together and lined with concrete.

The uptake of the Rondout siphon comes up through Hudson shale to an elevation of about 463 feet, and then passes through Bontecou mountain, of the same formation, in a grade tunnel about 1¼ miles long. A stretch of about 3¾ miles of cut-and-cover work brings the aqueduct to the Walkill siphon.

The Wallkill siphon carries the aqueduct under the Walkill creek and valley by means of a pressure tunnel, 14½ feet in diameter and 4½ miles long. In this performance it drops 577 feet to a depth of 90 feet below sea-level, and comes up again to about 440 feet above tide water.

Cut-and-cover work for a distance of fifteen miles almost due southward brings it to a point between Washington Square and Little Britain in the town of New Windsor, where it passes under a stream with a siphon about 3/5 of a mile long; and then continues for 1½ miles with cut-and-cover to the Moodna pressure tunnel. The level here, at a distance of 40 miles from Ashokan, is 418 feet.

At the edge of the Moodna valley a vertical down-take shaft 586 feet deep and an additional drop of about 50 feet in grade takes the aqueduct down to a depth of 218 feet below sea-level. In the five miles' distance under the valley and creek and under Storm King Mountain, it drops ten feet more and arrives at the Hudson river at a depth of 228 feet below sea-level.

### The Hudson River Crossing

The crossing of the Hudson river was a brilliant achievement, to appreciate which one must understand something of the geological conditions encountered.

The geological history of the Hudson valley through the Highlands is different from that of its other sections. The Highlands are primitive rocks which were among the first to be lifted up out of the primeval flood at the beginning of geological time. They are part of the "Appalachian protaxis," so-called, a great mountain ridge extending from Georgia on the southwest to Canada on the northeast which, with the Adirondack mountains of New York and the Laurentian mountains of Canada, were elevated above the sea when almost all the rest of the continent was yet submerged. They are more than sixty millions of years older than the Catskills.* In the alternate rise and fall of the land through long periods of time, deep valleys were cut across this protaxis, one of them being the pass through which the Hudson river now flows. After this pass was worn through the rocks, the land became depressed until the bottom of the rock gorge, which was once approximately at tide level, reached a point eight or nine hundred feet below the level of the sea, and became largely filled up with sand, gravel and boulders brought down by water and glaciers. Such is the condition between Storm King mountain

* See note on page 776 preceding.

on the west side of the Hudson and Breakneck mountain on the east side where the engineers decided to bring the aqueduct across. But it had to be built in solid rock, and nobody at that time knew exactly how deep the rock gorge was at this point. (See plate 21.)

To solve this riddle, a series of explorations and borings was made. Scows were placed in the river between the two shores and test pipes sunk through the water and the drift which formed the river bottom. At a distance of about 800 feet from each shore, rock was found at a depth of about 600 feet, but beyond these points toward the middle of the river, no rock was found. From the scow in the middle of the river, a boring 750 feet deep met with no better success, nothing but boulders, gravel and sand being encountered. It then became necessary to attack the problem from a new point of view. Shafts were sunk to a depth of 300 feet on each shore near the river, a working chamber was hollowed out at the bottom of each, and from each a diamond drill was started to work toward the middle of the river at a downward angle of about 45 degrees from the horizon. These two borings, one 2,000 feet long and the other 1,831 feet long, met in solid rock 1,500 feet below the surface of the river. As the boring from the scow in midstream had found no rock at a depth of 750 feet, and as the diagonal borings had shown it to exist at a depth of 1,500, it was thus ascertained that the bottom of the gorge was somewhere between those depths; but it was necessary to know more than this in order to ensure building the tunnel far enough below the bottom of the gorge to enable it safely to resist the great bursting pressure of the water in the aqueduct at that depth. Therefore, another pair of diagonal borings at a lesser angle was made and met in rock 950 feet below the surface of the river. The engineers therefore knew that they had a zone of rock at least 550 feet thick through which to bore their tunnel, and they decided to locate it 1,114 feet deep.

As an illustration of the cleverness of the engineers in making these diagonal borings, we may mention the device which they employed to ascertain the position of their drills. The drills showed a curious tendency to turn upward instead of following a straight line at the initial angle, and it is evident that unless the

engineers knew the amount of departure or corrected the deflection they could not know the vertical depth of their drills. They therefore inserted in the drill a small bottle partly filled with hydrofluoric acid, which etches glass. When this was let down in the boring and allowed to remain long enough to etch the bottle, the angle between the horizontal etched line and the axis of the bottle enabled the engineers to calculate the true position of the drill and make corrections accordingly.

Still another question had to be answered before it was safe to begin the tunnel across the river. From the data furnished by the borings and from deductions therefrom, Professor Crosby concluded that the profile of the cross-section of the rock gorge was U-shaped on the east side and V-shaped on the west side, with concave scarfs facing the southward, and it was necessary to ascertain if such scarfs existed, lest the tunnel should emerge from the rock into a concavity filled with glacial drift. Horizontal borings were therefore made from the shafts, with reassuring results. The selected route was considered safe and the contracts for construction were let.

As previously stated, the Moodna pressure tunnel reached the Hudson under Storm King mountain at a depth of 228 feet below sea-level. To construct the pressure tunnel under the Hudson, it was necessary to send an access shaft down from the surface of the ground to the pressure tunnel, and to carry the latter down 886 feet farther to a point 1,114 feet below sea-level before the actual crossing could be begun. The first access shaft was found to be too near the side of the mountain to enable it to resist the bursting pressure of the water which was to run in it, and a second shaft was sunk farther back from the river.

This siphon under the Hudson river is of the pressure tunnel type, cylindrical in section, 14½ feet in diameter, and built of concrete fitting compactly against the inside of a tunnel excavated through solid granite rock. The aqueduct comes up on the east side of the river to a height of 395 feet above sea-level, making the total depth of the up-take over 1,500 feet. The access shaft on the west side has been sealed with concrete, but the up-take shaft on the east side is to serve as the drainage and access shaft for the whole Moodna-Hudson-Breakneck pressure tunnel, and is

closed with a removable steel cap, weighing 50 tons, bolted down with 34 bolts 50 feet long and 2½ inches in diameter, to resist the terrific pressure of the water.

The middle of the Hudson river siphon is 45 miles from Ashokan reservoir.

### From Hudson River to Kensico Reservoir

From the up-take at Breakneck mountain, the aqueduct starts off again in a southeasterly direction, with a tunnel of 1/5 of a mile through the mountain, half a mile of cut-and-cover, a mile tunnel through Bull hill (granitic gneiss) and ¾ of a mile of steel-pipe siphon under Foundry brook.

It then turns in a more southerly direction and for about four miles is cut-and-cover, with one short tunnel and one short siphon.

About a mile and a half east of Garrison and a short distance south of Philipse brook, a grade tunnel nearly 2⅛ miles long carries it through granitic gneiss.

Continuing in a generally south-southeasterly direction, in the next 3½ miles it has first a stretch of cut-and-cover, then passes under Sprout brook by siphon, through Cat hill by tunnel, along the surface by cut-and-cover to Peekskill creek, and then under Peekskill creek by steel pipe siphon. In passing under the creek, a distance of 6,620 feet, the aqueduct drops from a level of about 380 feet to about 50 feet above sea-level, rising again to 370 feet on the south side of the valley. At present only one of the three pipes of this siphon has been laid. It is 9 feet 2 inches in diameter and is sufficient for the present supply of 250,000,000 gallons a day. When the Schoharie supplement of 250,000,000 gallons a day more is added, the other two pipes of this and the other steel pipe siphons will be laid. The length of the aqueduct from Ashokan to Peekskill creek is 56 miles.

The route is now generally south-southeast for about 2 miles, east-southeast 2 miles, and southeast 4¾ miles; and at a distance of 64¾ miles from Ashokan it passes under Croton lake about a mile above the new Croton dam. These 8¾ miles are mostly cut-and-cover, although there is a grade tunnel nearly a mile and a quarter long through a mountain of schist near Hunter brook, a shorter tunnel and two short siphons on the way.

The Croton lake siphon is a pressure tunnel which passes under the lake at an elevation of 150 feet below tide level and comes up to 354 feet above datum.

It is ten miles from the Croton siphon to Kensico reservoir. In this interval there are seven tunnels, all through schist, aggregating about 3¾ miles, and the rest is cut-and-cover.

### Kensico Reservoir

The aqueduct reaches Kensico reservoir at an elevation of 339 feet but the flow-line of the reservoir is 355 feet high. This reservoir is formed by a dam across the Bronx river about three miles north of White Plains, and is about one-fourth the size of the Ashokan reservoir. With its marginal strip, the reservation comprises 4,500 acres or about 7 square miles, one-half of which is covered with water. The reservoir is 4 miles long, from 1 to 3 miles wide, has 40 miles of shore line, and has a total capacity of 38,000,000,000 gallons. The main object of this reservoir is to store about 50 days' water supply for the city against accident. The flow line of the reservoir includes 1,300 acres acquired by the City from the old Kensico reservoir and its auxiliary Rye ponds, and for the enlarged project 3,200 acres more were purchased. There were no villages within this area to be obliterated, and a population of only 500 persons had to be removed. Only a few burial places were disturbed. Fourteen miles of old highways were discontinued and 9 miles of new highways, including 4 bridges, were built. The most important of the new highways is the county road leading from White Plains to Mount Kisco. This crosses an arm of the reservoir on a reinforced concrete arch bridge of five spans of about 127 feet each, known as the Rye Outlet bridge. Another highway runs along the top of the dam, approaching from the east over a masonry bridge of three arches, which crosses the waste channel of the reservoir.

The dam itself is an impressive piece of masonry. It is located about 400 feet up-stream from the old dam. It is 1,825 feet long, has a maximum height of 307 feet, is 235 feet thick at the base, and 28 feet wide on the top. It is built of cyclopean concrete. The up-stream face is of concrete blocks. The profile of the down-stream face is a true hyperbola. The concealed portion of the

down-stream face below the final grading was molded against concrete forms, while the exposed portion above ground consists of massive cut blocks of granite, ranging from pink Scotch to grey New England, set sufficiently far apart to produce an effective contrast of light and shade. The arrangement of the masonry of the face of the dam is quite original. For structural reasons, the dam has 22 expansion joints, thus dividing the down-stream face into 21 panels and 2 terminal structures. At each expansion joint a massive band of rusticated stone 15 feet wide projects boldly from the general surface. The intermediate panels are of roughly squared stone, surrounded by borders 3½ feet wide of dimension stone with relatively flat surface. Throughout the fields of the panels, headers of dimension stone, about 1½ feet square, set to a diamond pattern, project slightly from the general surface. (See plate 22.)

Along the level portion of the visible base of the dam is a masonry terrace, about 30 feet broad and 10 feet above the adjacent earth. Separated from the terrace by a tree-planted plaza, is a rectangular pool with fountains, forming a fitting terminal to the Bronx river parkway.

The inflow and outflow gate houses of the reservoir, which are separated by a distance of about 2¼ miles, are connected outside the reservoir by a by-pass conduit of concrete, 11 feet in diameter, by means of which water can be conducted to the aqueduct south of the reservoir without the intermediation of the reservoir if at any time it becomes desirable.

When, as determined by analysis at the laboratory in New York City, the water in the Ashokan reservoir requires chemical treatment for purification, it receives its first treatment at Ashokan, its second here at Kensico reservoir, and its final treatment at Hill View reservoir.

When the work in Kensico reservoir was at its height, about 1,500 men and their families lived in the camp built by the contractor a few hundred feet down-stream from the dam. There were also smaller outlying camps. The provision for the welfare of these men and their families during the years of construction was the same in kind as that described under the head of the Ashokan reservoir.

### From Kensico to Hill View Reservoir

From Kensico reservoir the aqueduct runs 16 miles southward to Hill View reservoir. In this stretch there are six grade tunnels aggregating over 2½ miles, the principal one of which is the East View tunnel, over a mile long. In a portion of the East View tunnel, the rock penetrated was found, after construction, to contain acid-forming mineral; and water, percolating through this rock, became acidulated and attacked the concrete tunnel lining. This difficulty was overcome by adding an interlining of vitrified brick to this portion of the tunnel. Between Kensico and Hill View reservoirs there are five siphons aggregating two miles, over half of which is represented by the Bryn Mawr siphon. The principal work in this section is the Yonkers pressure tunnel, 2¾ miles long. The southern end of this tunnel is about 120 feet under ground, at an elevation of 138 feet above tide-level. From this end, an up-take shaft carries the water up into Hill View reservoir.

### Hill View Reservoir

Hill View reservoir is in the City of Yonkers just north of the New York City line. Its function is to equalize the differences in the use of water in the City of New York from hour to hour. The final chemical treatment of the water is given here if necessary for its purification. It is an artificial reservoir of the earth embankment type, with a depth of 36½ feet holding 900,000,000 gallons of water. It has a water surface of 90 acres at a flow line of 295 feet. Unlike the Ashokan and Kensico reservoirs, the bottom is protected by six inches of concrete. The lower portion of the inner slope of the embankment is also protected by eight inches of concrete. The reservoir is divided into two basins by a wall that contains the aqueduct, so that either basin may be used, or the reservoir may be entirely cut out, if desired, by a by-pass.

### New York City Pressure Tunnel

From the Hill View reservoir the water drops through a down-take shaft 300 feet to a depth of 40 feet below tide level and enters the great city pressure tunnel. From this point onward, the aqueduct is constructed through solid rock until it reaches its terminal

shafts in Brooklyn and Queens and starts to cross the Narrows. For the first 5¾ miles, from Hill View reservoir to the Harlem river, through the Borough of the Bronx, the aqueduct is about 250 feet below the surface of the ground, in Fordham gneiss. Its course through the Bronx is indicated by the location of the shafts and its depth below the surface by the length of the shafts, as follows:

| Shaft | Location | Depth below surface of ground |
|---|---|---|
| 1. | 241st street and Jerome avenue, Van Cortlandt Park | 245 |
| 2. | Mosholu and Jerome avenues, Van Cortlandt Park | 228 |
| 3. | Sedgwick avenue and Mosholu Parkway, Jerome Park Reservoir | 218 |
| 4. | 196th street and Jerome avenue, Jerome Park Reservoir | 242 |
| 5. | 183d street and Aqueduct avenue | 226 |
| 6. | 176th steret and Aqueduct avenue | 278 |
| 7. | 167th street and Sedgwick avenue | 352 |

At the Harlem river it drops to a depth of 331 feet below tide-level to pass under the Stockbridge dolomite which underlies the river to Manhattan island. Its course through Manhattan is indicated by the location of the shafts, as follows:

| Shaft | Location | Depth below surface |
|---|---|---|
| 8. | 165th street and High Bridge Park | 478 |
| 9. | 150th street and St. Nicholas avenue | 441 |
| 10. | 135th street and St. Nicholas Park | 405 |
| 11. | 121st street and Morningside Park | 449 |
| 12. | 106th street and Central Park (west side) | 262 |
| 13. | 93d street and Central Park (west side) | 253 |
| 14. | 79th street and Central Park (west side) | 240 |
| 15. | 65th street and Central Park (near center) | 221 |
| 16. | 50th street and Sixth avenue | 218 |
| 17. | Sixth avenue and Bryant Park | 223 |
| 18. | 24th street and Broadway (Madison Square) | 205 |
| 19. | 6th street and Fourth avenue (Cooper Square) | 710 |
| 20. | Delancey and Eldridge streets | 749 |
| 21. | Clinton and South streets | 752 |

From a depth of 331 feet below sea-level at Harlem river, the aqueduct continues to descend in order to get under the insecure limestone (Stockbridge dolomite) which underlies the Manhattan street valley, and at Morningside Park and 121st street it is 365 feet below tide-level. It then rises abruptly until it is only about 50 feet below tide-level and so continues till it reaches Cooper Square. There it drops vertically to 664 feet below tide-

level preparatory to passing under the East river. In its course through Manhattan Island, the aqueduct encountered several subterranean springs, which were successfully dealt with.* Near Madison Square, a few slight cracks were caused by the compression of the rock under pressure of the water, and the tunnel was made tight by adding a sheet copper lining. The yielding of the rock under pressure, the cracking of the tunnel lining and the consequent outward leakage were so slight that if they had occurred out in the country no remedy would have been required.

The aqueduct passes from Manhattan Island at Clinton and South streets to Long Island at Sands and Bridge streets, under the rotten rock of the East river, at a depth of 704 feet below sea-level and 752 feet below the surface of the ground on the Manhattan side. Shaft 21 is deeper than the Woolworth building is high.

On the Brooklyn side, the aqueduct comes up to above sea-level, and continues at varying heights to Fort Greene Park by the following routes.

| Shaft | Location | Depth below surface of ground |
|---|---|---|
| 22. | Sands and Bridge streets | 717 |
| 23. | Flatbush avenue and Schermerhorn street | 318 |
| 24. | Fort Green Park at Myrtle avenue | 329 |

From Brooklyn, the water is conducted to the Boroughs of Queens and Richmond.

### Crossing the Narrows

The crossing of the Narrows, from Brooklyn to Richmond (Staten Island) is accomplished in a very ingenious manner. Instead of tunneling under the Narrows, where the rock is at an unknown depth, a 36-inch flexible jointed cast-iron pipe was laid in a trench dredged in the bottom of the harbor. This pipe was

* A curious example of this is afforded by the experience of the New Netherland bank at No. 41 West Thirty-fourth street. When the bank building was erected in 1904 a never-failing spring was struck and the owners of the building had to install an automatic pump in the cellar to keep the water pumped out. When the aqueduct was driven under that building in 1914 the spring was cut off and the use of the cellar pump has been discontinued. Oppenheim, Collins & Co., next adjoining on the east at 35 West Thirty-fourth street, had a similar experience.

made in twelve-foot lengths, the joints being designed on the ball-and-socket principle, allowing for a maximum deflection of 10° 50′ more or less. The joints were filled with lead, about 300 pounds of lead being used in each. Starting from the gate chamber on the Brooklyn side, the pipe was laid from a derrick scow which moved toward Staten Island as joint after joint was added to the inboard end on the scow. The portion of the pipe between the scow and the bottom of the harbor was sustained in a curve by temporary rigging which was carried along by the scow as the work progressed. When Staten Island was reached, connection was made with the gate-house on that shore. The total length of this siphon is 9,830 feet. Meters at each end indicate the leakage, if any. (See plate 23.)

### Silver Lake Reservoir

From the Staten Island end of the Narrows siphon, at the foot of Arietta street, a 48-inch cast-iron pipe is laid through Arietta street, Richmond road, etc., to Silver Lake reservoir, which is situated a mile and three-quarters southwest of St. George. The length of the aqueduct from Ashokan to this reservoir is 119 miles, to be exact, but it is called 120 miles in round numbers. The reservoir is about 2,400 feet long and 1,500 feet wide, and holds about 435,000,000 gallons. It is formed by natural depressions in the ground with earth embankments. The area of the water surface is 54 acres, which is surrounded by 111 acres of land. It has over a mile and a half of shore line. The water is 35 feet deep, and rises to a level at 228 feet above tide. The difference in the elevation of the surface of Silver Lake and Ashokan reservoirs, 362 feet, is due to friction.

### Measuring the Water

To keep track of the amount of water passing through the aqueduct, and to detect leakage, Venturi meters have been installed at various places. Those at the big reservoirs are the largest water-meters ever built. There is one just below the Ashokan reservoir, a second just above the Kensico reservoir, and a third where the water is drawn from the Kensico reservoir. Each of these meters is 410 feet long, of reinforced concrete excepting

for the bronze throat castings and the piezometer ring, which is also of cast bronze. In addition to these large meters, five gaging chambers have been built at various points along the aqueduct where the flow of water is measured by means of current meters. In the city tunnel just north of shaft 2 is a Venturi meter which measures all the Catskill water supplied to the City, and in the connection to Jerome Park reservoir a Venturi meter measures the flow in either direction. In the City tunnel there is a Venturi meter upon each connection between the tunnel and the distribution pipes in the streets.

### Cost of Construction

While the Catskill aqueduct is completed in the sense that it is now delivering 250,000,000 gallons of water a day to the City, the constructive work of the Board of Water Supply,— which must always be distinguished from the administrative Department of Water Supply, Gas and Electricity — is not yet finished. The Catskill aqueduct has been built with the capacity to transmit 500,000,000 gallons a day, but the Esopus watershed can supply only 250,000,000 gallons. The Board of Water Supply is therefore still engaged in developing the Schoharie watershed which is to furnish the next 250,000,000 gallons a day. The Catskill aqueduct has cost about $140,000,000 thus far, and the Schoharie development will cost about $22,000,000 more.

### Distribution of Water

The filling of Hill View reservoir began November 30, 1915, and Catskill water was first introduced into the distribution pipes of New York City, in the Borough of the Bronx, December 27, 1915. Manhattan Borough was first supplied November 29, 1916; Brooklyn and Queens Boroughs January 22, 1917; and the filling of Silver Lake reservoir, in the Borough of Richmond, began January 27, 1917.

The administration of the water-supply of the city is in the hands of the Department of Water Supply, Gas and Electricity, of which Commissioner William Williams was the head at the time of the formal dedication of the Catskill aqueduct in 1917.

The water is distributed through 3,127 miles of city-owned water mains within Greater New York, of which 172 miles are high pressure mains. Of the latter, 128 miles are in Manhattan and 44 in Brooklyn. The distribution is controlled by 66,300 gates. There are 49,200 fire hydrants in the Greater City, of which 4,100 are on the high pressure service in Manhattan and Brooklyn.

The Catskill water will rise by gravity in lower New York to a height of about 280 feet above tide water, or to about the sixteenth story of a building. A modern fire engine can pump it to the top of the Woolworth building, which is 750 feet high. The "high pressure" service referred to is designed to do the work of the most powerful fire-engine on a larger scale. There are two high pressure stations in lower Manhattan, each forcing into the high pressure mains as much water as 40 fire-engines. There are two high pressure stations in Brooklyn. A high pressure hydrant can furnish as many streams as five ordinary fire-engines and send the water fourteen stories high; and through stand-pipes the water can be sent forty stories high. Salt water can be used in the high pressure system if needed. (See plate 24.)

The city now consumes water at the rate of about 600,000,000 gallons a day, of which 40,000,000 gallons are supplied by private companies and 560,000,000 by the City. Of the latter, 250,000,000 gallons are Catskill water and the balance Croton water. The two Croton aqueducts have a combined capacity of 390,000,000 gallons a day, but for economic reasons only so much thereof as is necessary to supplement the Catskill supply is used, the remainder being held in reserve. The uses to which the Catskill and Croton supplies respectively are put are determined by their respective "heads" or pressures due to elevation of sources. The "head" of the Catskill supply is nearly two and a half times that of the Croton, sufficient to send it by gravity to all portions of the Bronx and Brooklyn and to all buildings of average height in other than the very highest portions of the three remaining boroughs. As this saves the expense of pumping, the Catskill water is the more valuable of the two.

## General Statistics

*Statistics of Ashokan, Kensico and Schoharie Reservoirs*
*Revised to January 1, 1918*

| | Ashokan | Kensico | Schoharie |
|---|---|---|---|
| Capacity, total, gallons | 132,000,000,000 | 38,000,000,000 | 22,000,000,000 |
| Capacity available, gallons | 128,000,000,000 | 29,000,000,000 | 20,000,000,000 |
| Water surface | 12.8 sq. miles | 3.5 sq. miles | 1,170 acres |
| Land acquired | 23.8 sq. miles | 7.0 sq. miles | 2,453 acres |
| Elevation of top of dam above tide | 610 feet | 370 feet | 1,150 feet |
| Length of reservoir | 12 miles | 4 miles | 5 miles |
| Length of shore line | 40 miles | 30 miles | 12 miles |
| Length of dams and dikes | 5½ miles | 3,300 feet | 2,100 feet |
| Main dam: | | | |
| total length | 4,650 feet | 1,825 feet | 2,100 feet |
| length of masonry portion | 1,000 feet | 1,825 feet | 1,300 feet |
| height, maximum | 240 feet | 307 feet | 200 feet† |
| thickness at base, maximum | 190 feet | 235 feet | 165 feet |
| thickness at top, minimum | 23 feet | 28 feet | 15 feet |
| Width of reservoir: | | | |
| maximum | 3 miles | 3 miles | 4/5 mile |
| average | 1 mile | 1 mile | 2/5 mile |
| Depth of reservoir: | | | |
| maximum | 190 feet | 155 feet | 150 feet |
| average | 50 feet | 52 feet | 58 feet |
| Villages submerged | 7 | 1 | 1 |
| Permanent population of submerged area in 1905 | 2,000 | 500 | 350 |
| Cemeteries removed | 32 | None | 3 |
| Bodies reinterred | 2,800 | None | 935 |
| Railroad relocated | 11 miles | None | None |
| Highways discontinued | 64 miles | 14.8 miles | 13 miles |
| Highways built | 40 miles | 15.1 miles | 13 miles |
| Highway bridges built | 10 | 4 | 2 |
| Principal items of work: | | | |
| earth and rock excavation | 2,500,000 cu. yds. | 1,400,000 cu. yds. | *725,000 cu. yds. |
| embankment | 7,300,000 cu. yds. | 2,010,000 cu. yds. | *681,000 cu. yds. |
| masonry | 900,000 cu. yds. | 965,000 cu. yds. | *319,000 cu. yds. |
| cement | 1,200,000 bbls. | 897,000 bbls. | *350,000 bbls. |
| Maximum number of men employed | 3,000 | 1,500 | |

* For dam only.

† Problematical; dam not yet built.

*General Features of Shandaken Tunnel*

Length, 18 miles.

Capacity, 600 m. g. d.

Elevation of intake, 1,050 feet.

Elevation of outlet, 970 feet.

Physical slope, Shafts 1 to 7, .000834 or 4.4 feet per mile, or 1 inch per 100 feet.

Between intake and Shaft 1 is a siphon tunnel — Height, 11 feet 6 inches; width, 10 feet 3 inches.

Number of shafts, intake shaft and seven others. Depth of shafts below original surface of ground:

Intake, 260 feet (165 feet below floor of chamber); Shaft 1, 369 feet; Shaft 2, 319 feet; Shaft 3, 352 feet; Shaft 4, 394 ± feet; Shaft 5, 629 feet; Shaft 6, 647 ± feet; Shaft 7, 378 feet.

Total depth of shafts, 3,348+ feet.

Greatest depth of tunnel below surface of 2,215 feet under top of mountain just east of Deep Notch.

Portal at Allaben, leading to Esopus Creek.

*Maximum Monthly Construction of Aqueduct*

Grade tunnel excavation..... 425 linear feet
(Contract 12, Bontecou tunnel; Hudson River shale; excavation 19 feet high, 16⅓ feet wide; 10.5 cubic yards per linear foot.)

Pressure tunnel excavation..... 530½ linear feet
(Contract 47, Wallkill pressure tunnel; Hudson River shale; excavation circular, 18⅓ feet in diameter; 10 cubic yards per linear foot.)

Shaft excavation..... 183 linear feet
(Contract 80, Breakneck Pressure Tunnel shaft; Storm King granite, excavation circular, 17½ feet in diameter; 8.9 cubic yards per linear foot.)

Concreting cut-and-cover aqueduct..... 1,740 linear feet
(Contract 15; approximately 8,800 cubic yards of concrete were placed from one plant; about 5 cubic yards per linear foot.)

Concreting grade tunnel..... 2,453 linear feet
(Contract 2, Garrison tunnel; approximately 6,900 cubic yards of concrete were placed in two directions from one central mixing plant at foot of shaft; 2.8 cubic yards per linear foot, exciuding invert of 0.18 cubic yards per linear foot, placed subsequently.)

Concreting pressure tunnel..... 2,834 linear feet
(Contract 67, City tunnel; diameter of finished tunnel, 12 feet; 9,470 cubic yards of concrete were placed; 3.34 cubic yards per linear foot, excluding invert of 0.61 cubic yard per linear foot, placed previously.)

Concreting shaft..... 310 linear feet
(Contract 80, Breakneck Pressure Tunnel shaft; diameter of finished shaft, 14 feet; the concrete placed averaged 3.6 cubic yards per linear foot; the 310 feet were lined in 22 days, elapsed time.)

| | | |
|---|---|---|
| Placing masonry in Kensico dam, Contract 9 | 84,450 | cubic yards |
| Laying 66-inch steel pipe, week | 1,409 | linear feet |
| Laying 66-inch steel pipe, day | 360 | linear feet |
| (Contract 86, part of Queens conduit; one 8-hour shift per day; pipe length, 30 feet.) | | |
| Laying 48-inch cast-iron pipe, week | 1,748 | linear feet |
| Laying 48-inch cast-iron pipe, day | 312 | linear feet |
| (Contract 86, part of Queens conduit; one 8-hour shift; pipe length, 12 feet.) | | |
| Laying 36-inch submerged pipe, week | 984 | linear feet |
| Laying 36-inch submerged pipe, day | 228 | linear feet |
| (Contract 99, Narrows siphon; three 8-hour shifts; pipe length, 12 feet.) | | |

*Weights of Large Valves and Fittings*

| | | |
|---|---|---|
| Cast steel dome on top of Drainage shaft, Hudson tunnel | 46.25 | tons |
| Bronze section valve, City tunnel, 66-inch | 20.5 | tons |
| Bronze riser valve, City tunnel, 72-inch | 21.4 | tons |
| Bronze riser valve, City tunnel, 48-inch | 9.4 | tons |
| Bronze shaft cap, City tunnel, 72-inch by 48-inch by 48-inch | 11.8 | tons |
| Bronze shaft cap, City tunnel, 48-inch by 30-inch by 30-inch | 4.8 | tons |

*Elevations of Water at Various Points Above Tide in New York Harbor*

| | |
|---|---|
| Ashokan reservoir, East basin | 587 feet |
| Ashokan reservoir, West basin | 590 feet |
| Aqueduct at headworks (flow line) | 511 feet |
| Kensico reservoir | 355 feet |
| Aqueduct at Kensico Lower gate-chamber | 330 feet |
| Water level, Eastview filters | 322 feet |
| Aqueduct at filter effluent (flow line) | 312 feet |
| Hill View reservoir | 295 feet |
| Silver Lake reservoir | 228 feet |

Water can be delivered in lower Manhattan at an elevation of 260 feet above tide level and in Brooklyn about 240 feet above tide level.

*Distances from Ashokan Reservoir*

| | |
|---|---|
| To Hudson River crossing | 45 miles |
| To Croton lake | 64 miles |
| To Kensico reservoir | 75 miles |
| To Hill View reservoir (New York City line) | 92 miles |
| To Silver Lake reservoir | 119 miles |

*Principal Total Quantities*

| | | |
|---|---|---|
| Earth excavation in open cut | 16,000,000 | cubic yards |
| Earth excavation in tunnel | 50,000 | cubic yards |
| Rock excavation in open cut | 1,000,000 | cubic yards |
| Rock excavation in tunnel | 2,700,000 | cubic yards |
| Masonry in open cut | 4,200,000 | cubic yards |
| Masonry in tunnel | 1,100,000 | cubic yards |
| Cement | 6,700,000 | barrels |
| Cast iron | 27,000 | tons |
| Steel | 32,000 | tons |
| Bronze and brass | 3,000,000 | pounds |

## *Brief Chronology of Catskill Aqueduct*

| | |
|---|---|
| March 15, 1897 | Report to Manufacturers' Association; plan and sources west of Hudson river considered for Greater New York. |
| March 23, 1900 | John R. Freeman's report submitted to Comptroller Coler. |
| November 30, 1903 | Burr-Hering-Freeman Commission's report rendered to Mayor Low. |
| June 3, 1905 | Catskill aqueduct bill became a law, chapter 724, Laws of 1905. |
| June 9, 1905 | Board of Water Supply Commissioners appointed by Mayor McClellan. |
| August 1, 1905 | Chief Engineer began his duties. |
| October 9, 1905 | Report to Board of Estimate and Apportionment, recommending development of Catskill Mountain watersheds submitted. |
| October 27, 1905 | Plan for this development adopted by Board of Estimate and Apportionment. |
| November 3, 1905 | Plan filed with State authorities for approval. |
| November 7, 1905 | Constitutional amendment passed exempting water-supply bonds from debt limit. Became effective January 1, 1906, but retroactive to January 1, 1904. |
| May 14, 1906 | Development of watersheds of Esopus, Rondout and Catskill creeks approved by State authorities. |
| February 23, 1907 | Experimental shaft, now West shaft of Hudson pressure tunnel begun. |
| March 27, 1907 | Contract 2, the first for aqueduct construction, embracing 11 miles between Cold Spring and Hunters brook, awarded. |
| June 20, 1907 | First sod turned, with appropriate ceremonies, by Mayor McClellan. |
| August 26, 1907 | Contract 3, for the Main dams of Ashokan reservoir, awarded. |
| February 28, 1908 | Police bureau established. |
| April 28, 1908 | First concrete placed for aqueduct structure, near Peekskill. |
| September 19, 1908 | First masonry laid for Olive Bridge dam, Ashokan reservoir. |
| December 10, 1909 | Contract 30, for Hill View reservoir, awarded. |
| December 24, 1909 | Contract 9, for Kensico reservoir, awarded. |
| May 26, 1911<br>June 5, 1911 | Contracts 63, 65, 66 and 67, for the City tunnel awarded. |
| August 23, 1911 | Maximum contractors' forces, 17,243 men, at active field work. |
| November, 1911 | Maximum contractors' earnings, $2,214,000 for month. |
| January 30, 1912 | Headings of Hudson pressure tunnel met, and "holing through" shot fired by Mayor Gaynor a short distance from east shaft at Breakneck. |
| September 9, 1913 | Storage of water in Ashokan reservoir begun. |
| January 12, 1914 | Last heading in City tunnel, between Shafts 8 and 9, "holed through" by Mayor Mitchel. |

| | |
|---|---|
| October 21, 1914 | Authority to develop Schoharie watershed obtained from State authorities. |
| November 22, 1915 | Began filling Kensico reservoir with Catskill water. |
| November 30, 1915 | Began filling Hill View reservoir with Catskill water. |
| December 22, 1915 | Board of Water Supply approved amended plan to develop Schoharie water shed. |
| December 27, 1915 | Bronx Borough supplied with Catskill water for first time, the first delivery of Catskill water into distribution pipes of New York city. |
| December 29, 1915 | Hill View reservoir filled to full flow line for first time. |
| January 7, 1916 | Report of Merchants' Association to Board of Estimate and Apportionment urging development of Schoharie creek without delay. |
| January 31, 1916 | Board of Estimate and Apportionment adopted amended plan to develop Schoharie watershed. |
| February 29, 1916 | Schoharie plan filed with State authorities for approval. |
| May 23, 1916 | Kensico reservoir filled to full flow line for first time. |
| June 6, 1916 | Schoharie plan approved by State authorities. |
| November 29, 1916 | Manhattan borough supplied with Catskill water for first time. |
| December 12, 1916 | Water from Ashokan reservoir wasted over spillway for first time. |
| January 22, 1917 | Brooklyn and Queens boroughs supplied with Catskill water for first time. |
| January 27, 1917 | Began filling Silver Lake reservoir in Richmond borough with Catskill water. |
| February 20, 1917 | Silver Lake reservoir filled to full flow line for first time. |
| October 12, 1917<br>October 13, 1917<br>October 14, 1917 | Principal days of the Catskill Aqueduct Celebration. |

# PART III

## THE CATSKILL AQUEDUCT CELEBRATION

[ 807 ]

# CHAPTER I

## THE MAYOR'S CELEBRATION COMMITTEE

### Organization, Personnel, Plan and Scope, and Finances

The movement for the celebration of the completion of the Catskill aqueduct began in the early part of 1916 with a series of informal meetings held by a number of leading citizens who realized the significance of the occasion. At one of these early meetings, held at the Bankers' Club on March 20, 1916, those present were Mayor Mitchel, Mr. Grosvenor Atterbury, Mr. John J. Kling, Dr. George F. Kunz, Mr. John W. Lieb, Jr., Hon. George McAneny, Hon. William McCarroll, Hon. Cyrus C. Miller, Mr. William Fellowes Morgan, Mr. E. H. Outerbridge, Mr. Theodore Rousseau, Dr. William Jay Schieffelin, Mr. C. F. Shallcross, and Mr. Henry R. Towne, the last named being one of the first to propose the idea. Mr. Outerbridge presided temporarily; and an Organization Committee was formed with Mr. McAneny as Chairman and Dr. Kunz as Secretary.

In later meetings of the Organization Committee, Mr. Grosvenor Atterbury, Hon. A. B. Hepburn, Mr. Jacob C. Klinck, Mr. C. Grant La Farge, Mr. Bradley Stoughton and others took part.

Following these early conferences, formal representations were made to Mayor Mitchel as to the desirability of appointing a Citizens' Committee to arrange for the celebration. As a result of these recommendations, the Mayor ,on December 22, 1916, invited about 700 citizens to meet at the City Hall on Wednesday afternoon, January 3, 1917, for the purpose of organizing as the Mayor's Catskill Aqueduct Celebration Committee. The Mayor's invitation was as follows:

City of New York
Office of the Mayor

December 22, 1916.

Dear Sir:

The Catskill aqueduct will be completed early in the spring of 1917. It is the greatest single piece of construction work ever undertaken by a municipality. As an engineering and administrative achievement it is equal to the Panama canal. The completion of the work within the estimated cost and in less than the estimated time is of supreme importance to the life, the health and the security of the property of this city.

Early last summer the following gentlemen, organized into a preliminary committee, met the Mayor and requested him to appoint a larger committee to arrange for a celebration befitting an event of such material and historical significance:

| | |
|---|---|
| Grosvenor Atterbury | Cyrus C. Miller |
| A. B. Hepburn | William Fellowes Morgan |
| John J. Kling | E. H. Outerbridge |
| George F. Kunz | Theodore Rousseau |
| John W. Lieb, Jr. | William Jay Schieffelin |
| C. Grant LaFarge | C. F. Shallcross |
| William McCarroll | Bradley Stoughton |

Henry R. Towne

They also suggested that the Mayor request Mr. George McAneny to serve as chairman of the committee, because of his long and distinguished service in civic affairs. This suggestion was peculiarly pleasing to the Mayor and he is fortunate in having obtained Mr. McAneny's consent to serve.

The Mayor hopes you will accept appointment on the committee. Will you let me know as soon as possible if it will be convenient for you to do so, and if you accept, will you be good enough to attend the first meeting of the committee in the Board of Estimate room, City Hall, at 4 o'clock in the afternoon of Wednesday, January 3rd?

Very truly yours
Theodore Rousseau
Secretary to the Mayor.

At the meeting of January 3, the Mayor designated Hon. George McAneny as Chairman of the committee; Mr. George Featherstone was elected General Secretary; and Dr. Edward Hagaman Hall Executive Secretary; and the Chairman was authorized to appoint an Executive Committee and sub-committees. The official *personnel* was eventually completed as follows:

*Chairman*

George McAneny, LL.D.

*Treasurer*

Isaac N. Seligman

*Assistant Treasurer*

Stanley G. Ranger

*Secretary*

Edward Hagaman Hall, L. H. D.

EXECUTIVE COMMITTEE

*Chairman*

Hon. Arthur Williams

William C. Breed.
William Hamlin Childs.
Edward Hagaman Hall, L. H. D.
George F. Kunz, Ph. D., Sc. D.
John W. Lieb.
Samuel L. Martin.
George McAneny, LL.D.
Hon. William McCarroll.
Isaac N. Seligman.
Hon. Henry S. Thompson.
Charles H. Strong.
Henry R. Towne.

CHAIRMEN OF SUB-COMMITTEES

City Hall Exercises..... William Fellowes Morgan.
Civic Bodies ..... Robert Grier Cooke.
Illuminations ..... Nicholas F. Brady.
Official Dinner ..... Elbert H. Gary, LL.D., Sc. D.
Official Medal ..... Robert W. de Forest, LL.D.
Museum Exhibits ..... George F. Kunz, Ph. D., Sc. D.
Music Festivals ..... Oswald G. Villard, Litt. D., LL.D.
Public Schools ..... Leo Arnstein.
Pageant in Central Park..... William J. Lee.
Religious Exercises ..... Rev. Walter Laidlaw, Ph. D.

The *personnel* of the General Committee at the time of the celebration was as follows:

Allan Abbott
Franklin P. Adams
Hon. Herbert Adams
John Quincy Adams, L. H. D
Hon. Robert Adamson
John G. Agar
Robert I. Aitkin
Edward F. Albee
James S. Alexander
Gen. James N. Allison
Louis Annin Ames
A. A. Anderson
Charles W. Anderson
Edwin H. Anderson, Litt. D.
Gen. Daniel Appleton
Edward A. Arnold
Leo Arnstein
Charles S. Aronstam
John Aspegren
Vincent Astor
Grosvenor Atterbury
Gordon Auchincloss
Joseph S. Auerbach
Frank L. Babbott
Robert Low Bacon
Andrew D. Baird
George F. Baker, Jr.
Stephen Baker
Hon. Otto T. Bannard
Albert S. Bard
B. Walter Barnett
Joseph Barondess
Hon. Willard Bartlett
Bernard M. Baruch

Hon. Edward M. Bassett
Benjamin L. M. Bates
Hon. George Gordon Battle
Samuel Bauman
Edmund L. Baylies
Julian B. Beaty
Hon. James M. Beck
Hon. Daniel M. Bedell
David Belasco
August Belmont
Henry Harper Benedict
Russell Benedict
Hon. John A. Bensel
Charles P. Berkey, Ph. D.
Charles L. Bernheimer
Samuel Reading Bertron
Frank H. Bethell
Nicholas Biddle
Cornelius K. G. Billings
Leo Bing
Robert S. Binkerd
John V. Black
J. Stuart Blackton
Sol Bloom
S. J. Bloomingdale
Eugene Blumenthal
John Bogart, Sc. D.
Henry L. Bogert
Ernest Bohm
William E. Bohn
G. Louis Boissevain
Albert C. Bonaschi
Paul J. Bonwit
Robert H. Bosse
John McE. Bowman
Edward F. Boyle
Nicholas F. Brady
William A. Brady
John W. Brannan, M. D.
Marcus Braun
William C. Breed
Cranston Brenton
W. K. Brice
Max D. Brill
Arthur Brisbane
Nathaniel L. Britton, Ph. D., Sc. D.
J. Arthur Brooks
Elmer E. Brown, LL.D., Ph. D.
Henry Collins Brown
Samuel Brown, M. D.
Arnold W. Brunner
Henry W. Bull
Benjamin Bulmer
Cyril H. Burdett
George W. Burleigh
Charles C. Burlingham
Rev. David James Burrell, D. D.
John H. Burroughs
Ellis P. Butler
Glenworth R. Butler, M. D.
Nicholas M. Butler, LL.D., Ph. D.
Wallace Buttrick, D. D.
Henry W. Cannon
William B. Cardozo
Andrew Carnegie, LL.D.
J. B. Carrington
Robert A. Carter
John J. Cavanagh
William M. Chadbourne
Frank R. Chambers
Walter Chandler, Jr.
J. Parke Channing
C. E. Chapin
M. S. Chappelle
Alexander C. Chenoweth
Beverly Chew
William Hamlin Childs
Hon. Thomas W. Churchill
Appleton L. Clark
Hon. William A. Clark
Joseph I. C. Clarke
Lewis L. Clarke
Henry Clews
Francis Wright Clinton
Frank I. Cobb
Thomas Cochran
William S. Coffin
Edward R. Cohn
Robert J. Collier
Theodore W. Compton
C. B. Comstock
Hon. Maurice E. Connelly
Joseph E. Constantine, M. D.
Vito Contessa
Patrick J. Conway
Robert Grier Cooke
John Cort
George A. Cormack
Hon. George B. Cortelyou
Clarkson Cowl

C. Ward Crampton, M. D.
Bruce Crane
Hon. Alfred Craven
John B. Creighton
Hon. John D. Crimmins
Herbert Croly
Lincoln Cromwell
William B. Crowell
Warren Cruikshank
Frederick Cunliffe-Owen
E. J. Cuozzo
Hon. Henry H. Curran
Harry A. Cushing
R. Fulton Cutting
Edward H. Daly
Walter Damrosch, Mus. D.
Anderson Dana
Thomas Darlington, M. D.
Frank E. Davidson
J. Clarence Davies
J. V. Davies
Hon. Gherardi Davis
Henry H. Davis
Hon. Vernon M. Davis
Allan Dawson
Joseph P. Day
James A. Dayton
George Debevoise
Joseph H. DeBragga
Robert W. deForest, LL.D.
Joseph L. Delafield
Richard Delafield
Eugene Delano
Elias A. DeLima
Horace E. Deming
William C. Demorest
Alfonso DeNavarro
Hon. Chauncey M. Depew
Walter T. Diack
Prof. Frederick Dielman
Hon. A. J. Dittenhoefer
Dr. Norman E. Dittman
Cleveland H. Dodge
Henry L. Doherty
A. L. Doremus
Louis Hays Dos Passos
J. Hampden Dougherty
William H. Douglas
Hon. Frank L. Dowling
John J. Downing
Michael Dreicer
Henry Russell Drowne
Capt. Charles A. DuBois
William Butler Duncan
Harris A. Dunn
Finley Peter Dunne
John Ward Dunsmore
Knowlton Durham
Thomas F. Dwyer
Gen. George R. Dyer
Charles Jerome Edwards
George Ehret, Jr.
Robert W. B. Elliott
Robert Erskine Ely
Haven Emerson, M. D.
William Emerson
Joseph H. Emery
Frank C. Erb
Abraham L. Erlanger
Leander B. Faber
Samuel W. Fairchild
William C. Fargo
William V. Farkas
Arthur Farwell
Maurice Featherson
Hon. John T. Fetherston
Haley Fiske
William E. Fitch, M. D.
Rev. E. D. Fitzgerald
Harry H. Flagler
Prof. Henry T. Fleck
Ned Arden Flood
Rube R. Fogel
James B. Ford
Edward W. Forrest
Hon. Raymond B. Fosdick
Mortimer Fouquet
Thomas P. Fowler
William Fox
Hon. Joseph N. Francolini
Hugh Frayne
William C. Freeman
Daniel C. French, Litt. D.
Hon. John J. Freschi
Michael Friedsam
Algernon S. Frissell
Frank L. Frugone
Emil E. Fuchs
C. H. Fuller
George W. Fuller

Paul Fuller, Jr.
Michael Furst
Robert M. Gallaway
Col. Asa Bird Gardiner
Elbert H. Gary, LL.D.
Charles E. Gehring
Sumner Gerard
Arpad G. Gerster, M. D.
Stuart Gibboney
Eugene C. Gibney
Charles Dana Gibson
A. S. Gilbert
Cass Gilbert
W. G. Gilbert
Isaac Gimbel
J. M. Glenn
John J. Glennon
Hon. Leon G. Godley
Robert Goelet
Jacob Goldstein
James Riley Gordon
Joseph P. Grace
Rollin P. Grant
Thomas D. Green
Capt. Richard H. Greene
B. J. Greenhut
Daniel Greenwald
Rt. Rev. David H. Greer, D. D.
Herbert L. Griggs
Hon. Lloyd C. Griscom
O. J. Gude
Isaac Guggenheim
Herbert F. Gunnison
Charles T. Gwynne
R. M. Haan
Henry F. Haas
George Hahn
Rev. Frank O. Hall, D. D.
Edward Hagaman Hall, L. H. D.
Hon. J. J. Halleran
Francis W. Halsey
Albert Hallgarten
George M. Hard
Hon. Lamar Hardy
Duncan G. Harris
Joseph M. Hartfield
William Hartfield
Frank E. Harth
John A. Hartwell, M. D.
Ernest Harvier
Thomas Hastings
Arthur M. Hatch
James A. Hawes
Hon. McDougall Hawkes
J. Noble Hayes
Rowland Haynes
Isaac B. Hazelton
A. Augustus Healy
Thomas Healy
Hon. Job E. Hedges
A. Barton Hepburn, LL.D., D. C. L.
Victor Herbert
Oswald C. Hering
Col. William Hester
Theodore Hetzler
John H. Hill
William R. Hillyer
Stephen D. Hirschman
Stuard Hirschman
James T. Hoile
Edward Holbrook
Hamilton Holt, LL.D.
Hon. John J. Hopper
William T. Hornaday, Sc. D.
Conrad Hubert
Hon. Charles E. Hughes
Chas. Warren Hunt, LL.D.
Richard H. Hunt
Hon. Raymond V. Ingersoll
Adrian Iselin, Jr.
Charles Isham
A. Jacobi, M. D., LL.D.
S. K. Jacobs
D. S. Jacobus, E. D.
Walter B. James, M. D., LL.D.
Rev. Charles E. Jefferson, D. D.
Robert U. Johnson, Ph. D., L. H. D.
Prof. Henry P. Johnston
William A. Johnston
Oscar C. Jurney
Otto H. Kahn
Leon Kamaiky
Joseph E. Kean
Albert Keller
Hon. L. Laflin Kellogg
Com. J. D. J. Kelley, U. S. N.
John T. Kelly
Thomas Kelly
Henry W. Kent
Hon. Frederick Kernochan

John J. Kindred, M. D.
Darwin P. Kingsley
Gustavus T. Kirby
Marc Klaw
S. R. Klein, M. D., Ph. D.
Jacob C. Klinck
Col. Ardolph L. Kline
John J. Kling
Frank Kneisel
John J. Knewitz
Roland F. Knoedler
Samuel Knopf, Jr.
Carl A. Koelsch
Samuel S. Koenig
Lee Kohns
Cornelius G. Kolff
Hon. Frederick J. H. Kracke
George F. Kunz, Ph. D., Sc. D.
Howard Kyle
C. Grant LaFarge
Rev. Walter Laidlaw, Ph. D.
Frederick S. Lamb
Samuel W. Lambert, M. D.
Thomas W. Lamont
Abraham Landau
Louis Lande
Frank R. Lawrence
Richard W. Lawrence
John A. Leach
G. Howard Leavitt
J. Edgar Leaycraft
Albert R. Ledoux, Ph. D.
Frederic G. Lee
John J. Lee
Hon. William J. Lee
Thomas L. Leeming
Herbert Lehman
Eugene Leifels
Felix F. Leifels
Henry M. Leipziger, Ph. D., LL.D.
James M. Leopold
A. Mitchell Leslie
Joseph Levenson
Benjamin W. Levitan
Isadore M. Levy
Franklin C. Lewis
Nelson P. Lewis, LL.D.
William E. Lewis
Adolph Lewisohn
Samuel Lewisohn
John W. Lieb, Jr.
Charles M. Lincoln
Hon. Martin W. Littleton
Carl M. Loeb
Vincent Loeser
John H. Love
James Luby
William M. Macbean
H. M. MacCracken, LL.D., D. D.
Charles R. MacDonald
Rev. J. L. Magnes
H. Van Buren Magonigle
Jeremiah T. Mahoney
Hon. Dudley Field Malone
Hon. Milo R. Maltbie
O. H. Mannes
Rev. Wm. T. Manning, D. D.
William Allen Marble
James E. March
Joseph S. Marcus
Hon. Marcus M. Marks
Don Marquis
George A. Marsh
Walton H. Marshall
Edgar L. Marston
Bradley Martin, Jr.
Samuel L. Martin
Hon. Douglas Mathewson
Hon. Julius M. Mayer
Walter E. Maynard
Hon. George McAneny
Hon. Edward E. McCall
Hon. John T. McCall
Hon. William McCarroll
George B. McClellan, LL.D.
William McClellan
William F. McCombs
Philip J. McCook
Walter L. McCorkle
John J. McCormack
James A. McDonald
Gates W. McGarrah
Lawrence McGuire
John Hall McKay
Andrew McLean
Emerson McMillin
S. C. Mead
Richard W. Meade
John Henry Mears
Daniel Meenan

Rev. Harlan G. Mendenhall, D. D.
O. J. Merkel
Hon. Herman A. Metz
Julius P. Meyer
Sidney E. Mezes, LL.D., Ph. D.
Merle Middleton
Charles R. Miller, LL.D.
Hon. Cyrus C. Miller
George N. Miller, M. D.
Hugh Gordon Miller
Ogden L. Mills
Walter S. Mills, M. D.
Henry B. Minton, M. D.
Edward P. Mitchell, LL.D.
James M. Montgomery
George T. Moon
Eugene F. Moran
Hon. Edward M. Morgan
J. P. Morgan
William Fellowes Morgan
William Forbes Morgan
Henry Morgenthau
Max Morgenthau
Robert Lee Morrell
George T. Mortimer
Henry Moskowitz, M. D.
Rev. Joseph Mulry
James J. Munro
Hon. Daniel F. Murphy
Hon. John J. Murphy
Patrick F. Murphy
Thomas Murray
Thomas E. Murray
William C. Muschenheim
George W. Naumburg
Walter Neumuller
Hon. Richard S. Newcombe
Edward T. Newell
William G. Newman
Courtlandt Nicoll
Hon. DeLancey Nicoll
John W. T. Nichols
Dr. William H. Nichols
John H. O'Brien
John P. O'Brien
Hon. Morgan J. O'Brien
Adolph S. Ochs
Rollo Ogden, L. H. D.
Col. Willis L. Ogden
Hon. James A. O'Gorman
Hon. Arthur J. O'Keeffe
Eben E. Olcott
Hon. Denis O'Leary
Frank Oliver
Harry E. Oliver
Robert Olyphant
Alfred E. Ommen
Hon. Samuel H. Ordway
Henry F. Osborn, LL.D., Sc. D.
William Church Osborn
Farley Osgood
Kano Oshima
Eugene H. Outerbridge
R. Pagenstecher
Hon. Victor H. Paltsits
Hon. Alton B. Parker
G. Elton Parks
Hon. Herbert Parsons
William Barclay Parsons
William Bowne Parsons
Hon. Thomas G. Patten
Prof. Henry Carr Pearson
W. Albert Pease, Jr.
Vincent C. Pepe
Hon. George W. Perkins
Ralph Peters
Nathaniel Phillips
Hon. N. Taylor Phillips
Gottfried Piel
James F. Pierce
John B. Pine, L. H. D.
Antonio Pisani, M. D.
Celestino Piva
Ira A. Place
George A. Plimpton, LL.D.
William M. Polk, M. D.
Walter B. Pollock
Ralph H. Pomeroy, M. D.
Rev. D. de Sola Pool
Ruel W. Poor
H. Hobart Porter
George B. Post
Dr. Woodruff L. Post
Hon. Lewis H. Pounds
Dallas B. Pratt
Frederic B. Pratt
Herbert L. Pratt
Hon. William A. Prendergast
Frank Presbrey
Charles W. Price

J. Coll Price
Joseph M. Price
Hon. Cornelius A. Pugsley
Prof. M. I. Pupin
George Haven Putnam, Litt. D.
Stanley G. Ranger
Irving E. Raymond
Leo. L. Redding
Fred A. Reed
William C. Reick
Ogden Mills Reid
John F. Reis
Rev. Christian F. Reisner, D. D.
James Bronson Reynolds
Philip Rhinelander
Calvin W. Rice
Leonard Richards
Victor Ridder
Welding Ring
Francis L. Robbins, Jr.
Allan Robinson
David Robinson
Edward Robinson, LL.D., Litt. D.
Nelson Robinson
John D. Rockefeller, Jr.
G. Vernon Rogers
Saul E. Rogers
Theodore Roosevelt, Jr.
Hon. Otto Rosalsky
Walter T. Rosen
Morris Rosenwasser
Edward S. Rothschild
Theodore Rousseau
Henry E. Royce
E. A. Rumely, M. D.
Col. Jacob Ruppert, Jr.
Charles H. Sabin
Col. Henry W. Sackett
Isadore Saks
Walter J. Salomon
Col. Herbert L. Satterlee
William L. Saunders
Reginald H. Sayre, M. D.
R. J. Schaefer
Arthur F. Schermerhorn
William J. Schieffelin, Ph. D.
Jacob H. Schiff
Mortimer L. Schiff
Gustave Schirmer
Carl L. Schurz
Charles M. Schwab
Charles Scribner
Charles E. Scribner
Hon. Patrick J. Scully
Frederick C. Seabury
Hon. Samuel Seabury
Isaac N. Seligman
Lorenzo Semple
Cecil F. Shallcross
W. S. Sharpe
John M. Shaw
George R. Sheldon
Finley J. Shepard
Gen. Charles H. Sherrill
Abraham Shiman
Charles E. Sholes
Lee Shubert
Joseph Ferris Simmons
Franklin Simon
Robert E. Simon
William A. Simonson
Lewis E. Sisson
William Sloane
William Douglas Sloane
Thomas W. Slocum
Chandler Smith
Henry Clapp Smith
Jesse M. Smith
J. Gardner Smith, M. D.
Rev. Joseph F. Smith
James MacGregor Smith
Hon. R. A. C. Smith
Stephen L. Snowden
Luigi Solari
Frederick E. Sondern, M. D.
Dr. Edmund B. Southwick
Alexander H. Spencer
Nelson S. Spencer
James Speyer
Hon. Charles A. Spofford
Frank J. Sprague
Walter Stabler
Hon. Charles Steckler
Fred M. Stein
Joseph H. Steinhardt
Louis Stern
Fred Sterry
Francis Lynde Stetson
Frederick A. Stevenson
James Stillman

Hon. Henry L. Stimson
Edward W. Stitt, Ph. D.
Henry L. Stoddard
I. N. Phelps Stokes
Bradley Stoughton
Charles W. Stoughton
Charles H. Stout
Jesse Isidor Straus
Hon. Oscar S. Straus
Hon. Charles Strauss
Frank V. Strauss
Charles H. Strong
John F. Sullivan
Gerard Swope
Herbert B. Swope
Henry W. Taft
J. F. Talcott
Frederick C. Tanner
Col. James I. Taylor
John S. Thacher, M. D.
Benjamin B. Thayer
Capt. Paul G. Thebaud
C. G. M. Thomas
Gustav W. Thompson
Henry S. Thompson
Jefferson D. Thompson
W. Gilman Thompson, M. D.
Charles Thorley
Joel W. Thorne
John L. Tildsley
Francesco Tocci
Hon. Calvin Tomkins
John R. Totten
Henry R. Towne
Charles H. Townsend, Sc. D.
Copeland Townsend
Harry H. Treadwell
Eliot Tuckerman
Horace S. Tuthill
William P. Tuttle, Jr.
Albert Ulmann
Theodore N. Vail, LL.D.
Guy Van Amringe
Col. Cornelius Vanderbilt
William K. Vanderbilt
F. A. Vanderlip
Hon. Calvin D. Van Name
Cortlandt S. Van Rensselaer
Addison A. Van Tine
Marion J. Verdery
Oswald G. Villard, Litt. D., LL.D.
Hon. Robert F. Volentine
Otto Von Schrenk
Hon. W. H. Wadhams
Col. Alfred Wagstaff
James M. Wakeman
Samuel Wallach
James J. Walsh, Ph. D., M. D.
Felix M. Warburg
Hon. Cabot Ward
Charles Elliott Warren
Lloyd Warren
Harry W. Watrous
Hon. Archibald R. Watson
Edward E. Watts
William Webber
F. Delano Weekes
Hon. John E. Weier
J. Alden Weir
Rev. George U. Wenner, D. D.
James E. West
Hon. John Whalen
Charles A. Whelan
Alexander M. White
Alfred T. White
Rev. Gaylord S. White
Lawrence G. White
Thomas C. Whitlock
Hon. Thomas W. Whittle
Hon. George W. Wickersham
Albert H. Wiggin
John A. Wilbur
Louis Wiley
William J. Wilgus
Hon. William G. Willcox
Hon. William R. Willcox
Hon. Arthur Williams
F. Ballard Williams
H. P. Williams
John D. Williams
Lloyd T. Williams
Talcott Williams, LL.D., L. H. D.
W. H. Williams
Hon. William Williams
George T. Wilson
Paul C. Wilson
Gen. George W. Wingate
Hon. Egerton L. Winthrop, Jr.
Henry A. Wise
Joseph H. Wise

Rev. Cornelius Woelfkin, D. D.
Walter Henry Wood.
Hon. Arthur Woods
William Woodward
Frank W. Woolworth
Henry J. Wright
F. A. Wurzbach
John A. Wyeth, M. D., LL.D.
Hon. Richard Young
Dr. Paul Henry Zagat
Peter Zucker

## Plan and Scope

Most of the meetings of the Executive Committee were held at luncheon time at the Union League Club, where the members enjoyed the generous hospitality of the Chairman, the Hon. Arthur Williams. At several of the meetings public officials variously concerned in the celebration arrangements were present by invitation and lent the aid of their valuable advice. Particularly helpful in this respect was Mayor Mitchel, who attended not only the preliminary meeting at the Bankers' Club on March 20, 1916, the organization meeting in City Hall January 3, 1917, and the conference meeting at the Bankers' Club on August 2, 1917, but was also cordially accessible at his office in the City Hall for conference when necessary. Comptroller William A. Prendergast, Park Commissioner Cabot Ward, Commissioner of Water Supply, Gas and Electricity William Williams, and Commissioner of Water Supply Charles N. Chadwick were also very helpful with advice at various meetings.

At first it was intended to formulate a plan of celebration having somewhat the scope of the Hudson-Fulton Celebration in 1909, but the entry of the United States into the European war necessitated a change of plan, and it was decided to limit the celebration to a few simple but expressive features.

The dates selected for the official ceremonies, Friday, Saturday and Sunday, October 12, 13 and 14, 1917, were chosen as being the most convenient to include the 75th anniversary of the turning on of the Croton water at the fountain which stood in that part of City Hall Park now occupied by the old post-office building on October 14, 1842. As October 12 was Columbus Day and October 13 a Saturday, the dates permitted the largest participation by the people with the least interruption of business.

One interesting feature which was partially developed but was eventually abandoned for the sake of economy deserves mention on account of its unique character. At the meeting of the Execu-

tive Committee on June 13, 1917, the Hon. William Williams, Commissioner of Water Supply, Gas and Electricity, unfolded an idea which he had entertained for some time for the creation of an artificial waterfall,— a Niagara Falls on a small scale,— from one of the East River bridges, which could be illuminated in colors at night. It was thought that by laying a 4-inch pipe across the Manhattan bridge, for instance, and perforating it at intervals, a graceful curtain of falling water and mist might be formed which, illuminated by batteries of electric light, would produce a unique effect. Colored designs were therefore drawn, and, with the cooperation of the Commissioner of Water Supply, Gas and Electricity, the electrical experts of the Edison Company, and Mr. W. D. Ryan, the inventor of the Ryan Scintillator, which was operating at 155th street and the Hudson river during the Hudson-Fulton Celebration and later at Niagara Falls, an experimental demonstration was made in the courtyard of one of the repair shops of the Department of Water Supply, Gas and Electricity in Brooklyn on the evening of August 14, 1917. Jets arranged along the roof of a two-story building and supplied by a 6-inch water-pipe were put into operation and illuminated by colored electric lights, producing some beautiful effects. The experiment was highly satisfactory, but, as before stated, the plan was eventually given up in the interest of economy.

The features of the celebration which were finally carried out will appear from the following chapters.

### Finances

The celebration cost about $26,000, of which the City paid about $16,202. The balance, about $9,798, was raised by subscription, sale of dinner tickets, etc., by the Mayor's Committee. These figures do not include the cost of installing the jet fountain in Central Park ,which was a private gift amounting to about $10,000; the expenses of making and showing moving pictures and photographs, generously done without expense to the committee by the New York Edison Co.; the expenses of numerous plans and designs for the permanent memorial in Central Park, which were made out of public spirit by Mr. Thomas Hastings; very considerable disbursements for hospitality to the committee and for educational purposes made by Hon. Arthur Williams, etc.

# CHAPTER II

## THE CITY HALL EXERCISES

### The Angelina Crane Fountain Unavailable

The official ceremonies began with exercises in the City Hall at noon on Friday, October 12, 1917.

Earlier in the year it had been hoped that the Angelina Crane fountain which is being made to supersede the present dilapidated fountain in City Hall Park, might be ready so that the Catskill water could be turned on at this fountain as the Croton water was turned on 75 years before at the fountain which then stood in that portion of the park now occupied by the old post-office building. This fountain was provided for by the will of Angelina Crane, which was executed January 9, 1891, probated July 28, 1896, and contained the following bequest:

"All the rest, residue and remainder of my estate, of every kind and description, wheresoever situated and whenever the same may have been acquired, I give, devise and bequeath to the Mayor, Aldermen and Commonalty of the City of New York, with the request that the same be expended, if such expenditure is sanctioned by law, in the erection of a drinking fountain in the City of New York to my memory."

At various times between June, 1901, and September 30, 1909, payments in compliance with Mrs. Crane's bequest were made to the City, aggregating $60,000; and on May 3, 1909, the City entered into a contract with Mr. Frederic MacMonnies, sculptor, to design and erect a drinking fountain in City Hall Park for the sum of $60,000. Mr. MacMonnies, who undertook the sculptural work, made a contract with Mr. Thomas Hastings, the architect, to design the architectural setting of the fountain. But although the work of both of these gentlemen was well advanced at the time of the Catskill aqueduct celebration, it was impossible to finish it in time for the ceremonies. The exercises at the City Hall were therefore entirely indoors.

### The City Hall Arrangements

The committee in charge of the arrangements at the City Hall consisted of the following gentlemen:

William Fellowes Morgan, Chairman

| | |
|---|---|
| Grosvenor Atterbury | William C. Demorest |
| George W. Burleigh | Hon. A. J. Dittenhoefer |
| Dr. Nicholas Murray Butler | Dr. George F. Kunz |
| Joseph L. Delafield | George T. Wilson |

The official invitation to these exercises read as follows:

{ Seal of } { the City }

The Mayor of the City of New York
and the Mayor's
Catskill Aqueduct Celebration Committee
request the honor of your presence
at the ceremonies to be held in the City Hall
in celebration of the completion of the
Catskill Aqueduct
and in honor of its builders
on Friday, the twelfth of October
One thousand, nine hundred and seventeen
at twelve o'clock noon

Please present the accompanying
admission card at the City Hall

In response to this invitation, the Aldermanic Chamber was filled to its utmost capacity, the large desks and chairs of the Aldermen having been removed and smaller chairs used in their places to increase the seating capacity. The canopy and wall back of the rostrum were simply decorated with national colors.

The following guests of honor assembled in the Governor's room, and were escorted to the Aldermanic chamber by Hon. George McAneny, Chairman of the Mayor's Committee; Hon. Arthur Williams, Chairman of the Executive Committee; Mr. William Fellowes Morgan, Chairman of the City Hall Committee, and the members of the Executive and City Hall Committees:

Hon. John Purroy Mitchel, Mayor of New York.
Major George B. McClellan, ex-Mayor of New York.
Hon. William A. Prendergast, Comptroller of the City of New York.
Hon. Frank L. Dowling, President of the Board of Aldermen.
Hon. Marcus M. Marks, President of Manhattan Borough.

Hon. Lewis H. Pounds, President of Brooklyn Borough.
Hon. Douglas Mathewson, President of Bronx Borough.
Hon. Maurice E. Connolly, President of Queens Borough.
Hon. Calvin D. Van Name, President of Richmond Borough.
Hon. Charles Strauss, President, Commissioner of Water Supply.
Hon. Charles N. Chadwick, Commissioner of Water Supply.
Hon. John F. Galvin, Commissioner of Water Supply.
Hon. John A. Bensel, ex-Commissioner of Water Supply.
Hon. Charles A. Shaw, ex-Commissioner of Water Supply.
Mr. J. Waldo Smith, Chief Engineer, Board of Water Supply.
Mr. Alfred D. Flinn, Deputy Chief Engineer, Board of Water Supply.
Hon. William Williams, Commissioner of Water Supply, Gas and Electricity.
Mr. E. H. Outerbridge, President of the Chamber of Commerce.
Mr. Jacob C. Klinck, President of the Manufacturers' Association.
Mr. Emory Warfield, President of the Board of Fire Underwriters.

The Merchants' Association was represented by its President, Mr. William Fellowes Morgan, who was Chairman of the City Hall Committee and who presided on this occasion.

### Address by William Fellowes Morgan

Mr. Morgan called the meeting to order and opened the exercises with the following address:

"Mr. Mayor: Before presenting to you the members of the Board of Water Supply, may I be permitted to give a very brief sketch of the events which led up to the appointment of the Board in 1905.

"It was the belief of the projectors of the original Croton water system that it would amply supply the needs of the city for a century or more, but it became clearly evident about 1890 that the city must within a few years seek water elsewhere, and in 1897 when Greater New York was created the water needs of Brooklyn became most acute and added to the anxiety of the situation.

"In that year Mr. Charles N. Chadwick, as Chairman of a committee of the Brooklyn Manufacturers' Association, made a report which contained four important propositions:

"1st. Immediate steps should be taken to secure new and vastly enlarged sources of supply.

"2nd. As the necessary outlays would exceed the debt-incurring powers of the city, the constitutional limitations would have to be changed.

"3rd. The necessary work would extend through a long period of years.

"4th. In order to secure efficient administration and continuity of policy, the work should be entrusted to a commission wholly exempt from political domination.

"Little interest was taken in this whole matter by the general public until in 1899 the notorious Ramapo contract, which would have taken from the City of New York the future control of its water supply, was on the verge of consummation. The majority of the Board of Public Improvement was ready to ratify the contract recommended by the Commissioner of Water Supply, but the then Comptroller of the City, the Hon. Bird S. Coler, vigorously opposed it.

"Through the immediate activity of the Merchants' Association, the citizens of New York were made aware of the facts, and thus public interest was quickly aroused in opposition to the Ramapo contract. Through its President, the late William F. King, it offered to undertake at its own expense a thorough study of the City's water needs. The Board of Public Improvements yielded to this strong pressure and consented to postpone action on the contract pending the investigation. The Association thereupon appointed a committee, embracing a number of engineers of the highest repute, among them Mr. Henry R. Towne, who has since, as President of the Merchants' Association, rendered such valuable service to this whole project. The report of this committee was conclusive and destroyed forever the possibility of such an improvident contract as that proposed by the Ramapo Company.

"At the same time, Mr. John R. Freeman, who had been retained by Comptroller Coler, made his report which concurred with the other.

"In 1901, Mayor Low appointed the Burr-Hering-Freeman Commission which in 1903, after most careful investigation, made its great report recommending that the city should go far beyond the limits originally considered practicable, and involving engineering and construction problems of the greatest magnitude.

"The estimates for this majestic work reached the colossal figure of about $180,000,000 and demonstrated the wisdom of Mr. Chadwick's view stated in 1897 as to the means for financing the undertaking.

"The Merchants' Association, with the cooperation of the other civic bodies, became actively interested in the proposition so to amend the Constitution as to exempt from the City's debt limit

outlays for providing water. They also helped to secure, after two years of bitter fighting at Albany, the legislation to insure the necessary condemnation rights and to create a commission with adequate power.

"In the year 1904 the Honorable George B. McClellan, then Mayor of the City, actively interested himself in the effort to obtain this necessary legislation, and with Mr. Seth Low appeared before the Legislature and urged the pressing character of the City's need.

"These bills finally became a law on June 3, 1905.

"During this agitation Mayor McClellan had voluntarily made the pledge to remove the new Board from politics by appointing as members thereof men selected by him from lists of nominees to be submitted to him by the Chamber of Commerce, the Manufacturers' Association of Brooklyn and the New York Board of Fire Underwriters.

"In accordance with this arrangement, the first members of the Board appointed were J. Edward Simmons, Charles N. Chadwick and Charles A. Shaw.

"In January, 1908, Mr. John A. Bensel succeeded Mr. Simmons, and on the resignation of Messrs. Bensel and Shaw, Mayor Gaynor appointed Messrs. John F. Galvin and Charles Strauss.

"I now have the honor of presenting Mr. Charles Strauss, Mr. Charles N. Chadwick and Mr. John F. Galvin, in order that they may submit to you their report of the great undertaking."

### Report of the Board of Water Supply

Mr. Strauss, President of the Board of Water Supply, then read the following report in behalf of his colleagues and himself:

"Hon. John Purroy Mitchel,

"Mayor of The City of New York.

"Sir:

"The Commissioners of the Board of Water Supply, appointed pursuant to Chapter 724 of the Laws of 1905, and charged with the duty of furnishing to the City of New York an additional supply of pure and wholesome water, beg leave to report the completion of the first stage of the work, and the actual delivery of an additional supply of water, exceeding 300 million gallons daily, from the Catskill Mountains to all boroughs of the Greater City.

"This result has been accomplished more than one year ahead of the estimated time and about $7,000,000 below the estimated cost.

"Immediately upon the appointment of the Commissioners by Mayor George B. McClellan, in whose administration and under

whose guidance this work was inaugurated, the Board of Water Supply became charged with the duty of determining the sources of supply from which the water was to be taken. The City then had in round figures four million inhabitants, and the practicable limit of its water resources had for some time been reached. Numerous previous City administrations had attempted to solve the problem and there had been collected a vast amount of data which it remained for the Board of Water Supply to investigate and reduce to practice.

"It created an administrative department to handle contracts and the legal and financial matters of the Board, which ran into colossal figures; and it organized a great engineering force, at the head of which it placed J. Waldo Smith, who, as Chief Engineer for the Aqueduct Commissioners, had had immediate charge of all the engineerng work connected with the Croton supply.

"Realizing the critical situation that would confront the City before any additional supply of water could be obtained, the Commissioners proceeded with all possible speed to locate the most desirable sources. In exactly four months after appointment they determined that the Catskill Mountain region offered the most available and best source of supply, and submitted to the Board of Estimate and Apportionment, for its approval, a map, plan and estimate of cost for obtaining this water from the Esopus, Rondout, Catskill and Schoharie watersheds, in the amount of at least 500 million gallons a day. Later, more detailed studies determined that this quantity of water could most economically be developed from the Esopus and Schoharie creeks, leaving the other watersheds available for possible future development.

"The plans thus made were unanimously approved by the Board of Estimate and Apportionment on October 27, 1905, and by the State Water Supply Commission in May, 1906, after necessary legislation had been secured, thus paving the way for the Board to proceed actively with the surveys and investigations and the preparation of the detail plans upon which the actual construction was to depend.

"With such speed were these preparations pushed that the first contract, covering 11 miles and known as Contract No. 2 of the Catskill aqueduct was awarded March 27, 1907. On June 20, 1907, the first sod on the line of the work was turned by Mayor McClellan, with appropriate ceremonies, near Garrison.

"The Board of Water Supply at that time undertook to deliver the first increment of 250 million gallons daily within ten years from the date of the award of the first contract, but long before this time the water delivery was in fact accomplished. Catskill water was turned into Kensico reservoir, north of White Plains,

on November 22, 1915; into Hill View reservoir, near Yonkers, on November 30, 1915; and was actually distributed for use in small quantities in the City of New York on December 27, 1915, and turned into general use in all the five boroughs of the city in January, 1917.

"Throughout the prosecution of the work the greatest care was exercised to co-ordinate the contracts so that, in case of any exigency, Catskill water might be delivered into the City through the Croton aqueduct, although the construction work was far from completion. In point of fact, Catskill water could have been delivered into Croton reservoir over four years ago, if a drought like that of 1911 had occurred.

"The main supply of the new system is drawn from the Ashokan reservoir, located in the Catskill Mountains about 16 miles west of Kingston. This reservoir has a capacity of 132 billion gallons, or enough to cover the Island of Manhattan to a depth of 30 feet; and its contents could supply the whole of Greater New York, at the present rate of consumption, for about eight months. It is 12 miles long and has a maximum depth of 190 feet. Before the water was impounded therein, seven villages were removed and eleven miles of the Ulster and Delaware railroad were relocated. The problems involved in the removal and relocation of the railroad were complicated, but, after negotiations covering several years, were satisfactorily solved by the Board acting in co-operation with the Board of Estimate and Apportionment.

"The construction of the aqueduct, which is 120 miles in length from the Ashokan reservoir to the terminal reservoir, Borough of Richmond, was divided into a number of parts, the most difficult being the tunnels under the Rondout valley, the Wallkill valley and the Hudson river. The Hudson river, with its deep rock gorges, flowing between the mountains and New York City, had to be crossed. Here engineering skill, rejecting the more obvious but less secure and more costly means of crossing by bridges or pipes, sank shafts 1,200 feet deep and drove a tunnel in the granite rock beneath the river, through which the water flows under pressure. These tunnels are 14 feet in diameter inside. The interior dimensions of the cut-and-cover aqueduct are 17 feet high by 17½ feet wide.

"For the City's security, with so long an aqueduct, it was very important to have a large store of water near by. Branching valleys three miles north of White Plains afforded a site for Kensico reservoir, which was formed by constructing one of the great masonry dams of the world, 1,825 feet long, with a maximum height of 307 feet. The water held in reserve here could supply the City's present rate of draft for nearly two months.

This Kensico reservoir is the objective point of the Bronx Parkway, a beautiful highway from New York City.

"The third important reservoir is that of Hill View, in Yonkers, at the New York City line, which is an equalizing reservoir for the varying consumption of New York City during the day and night.

"One of the great works of the Board was the City tunnel, which carries the water under the Borough of The Bronx, the Harlem river, the Borough of Manhattan and the East river to terminals in Brooklyn at Fort Greene Park and Flatbush avenue, from which conduits extend to the Boroughs of Queens and Richmond. Instead of delivering the water within the City limits in the usual pipe-lines, of which a great number of the largest size would have been needed, with the intolerable digging up of important avenue and streets, a great pressure tunnel, 18 miles long and from 200 to 750 feet in depth, was constructed beneath the busy thoroughfares of the City. This construction required about six years, and during the first three years involved the use daily of over ten thousand pounds of dynamite, which was exploded in the heart of the City without serious accident. The only surface indications were the 24 shafts with temporary buildings at their tops. Through these shafts the water is now flowing into distribution pipes beneath the streets.

"The last barrier to be crossed before the water could be supplied to Staten Island was the Narrows of New York Harbor. Here a 10,000-foot line of 36-inch diameter cast-iron pipes, each 12 feet long and having a ball-and-socket joint, was laid in a trench dredged in the harbor bottom and covered over with sand and gravel. Severe tests have proved this pipe-line to be remarkably watertight, due to the special devices employed.

"For these great achievements over physical obstacles tribute is due to the vision, skill and resourcefulness of the Board's engineers and the experts who aided them; to the energy and ability of the contractors; to the ingenuity of many maufacturers of equipment and materials, and to the faithfulness of thousands of mechanics and laborers who wrought by day and by night.

"In the course of its operations it became necessary for the Board of Water Supply to acquire title for the City to 21,330 acres, comprising 2,866 parcels, of real estate. Most of these were acquired by condemnation proceedings and the amounts awarded directed to be paid by the Supreme Court after hearings before commissioners. The amounts thus paid out, including indirect damages, aggregate $17,307,614, the detail of which has been minutely segregated in the annual reports prepared by the Auditing Bureau of the Board. It is the first time in the City history

that such information has been published and submitted to the Mayor and to the Comptroller of the City.

"Hardly had the Board begun to push its work forward when the Legislature of 1906 passed the Eight Hour Law. All the estimates which were made in the previous year were based upon a ten-hour day for labor.

"In the same year also, and after the estimates had been made, the Legislature passed a mandatory law compelling the organization of a constabulary force for the protection of the communities in the places where the work of the Board was to be carried on. This resulted in what is known as the Aqueduct police force, an organization now well known throughout the river counties.

| | | |
|---|---|---|
| "The original estimate of cost for completing the works to full capacity was | | $176,633,000 |
| "To this must be added the actual disbursements to date for maintaining the Aqueduct police | $2,315,251 | |
| "Also on account of the Eight-hour Law calculated upon actual disbursements for labor | 5,759,289 | |
| | | 8,074,540 |
| "Making a total of | | $184,707,540 |
| "Actual disbursements to September 30, 1917, including all present known liabilities | $138,977,273 | |
| "Add for work unfinished, included in the original estimate, viz.: | | |
| "Steel-pipe siphons and miscellaneous items to complete the Catskill supply | $5,700,000 | |
| "Proposed Schoharie supply, as authorized by the Board of Estimate | 22,175,400 | |
| "Filtration | 9,000,000 | |
| | 36,875,400 | |
| "Total | | 175,852 673 |
| "Leaving a margin of safety of | | $8,854,867 |

less than the total estimates of cost, subject, however, to the payment of various outstanding claims for real estate and business

damage, the total amount of which, however, cannot reduce this balance substantially.

"The accounts of the Board of Water Supply, aggregating cash payments of $137,560,058, have been examined and audited and found correct.

"The maximum number of employees of the Board of Water Supply at any time was 1,757, and the maximum contractors' forces ran at times as high as 17,000. To these must be added men in manufactories specially engaged on this work, bringing the grand total to 25,000.

"It is with great satisfaction we are able to report that the entire work has been so far completed without strike or labor disturbance of any kind worthy of mention. This is perhaps largely due to the fact that the contracts provided for camps with sanitary comforts for the workmen and their families, and that camp schools were established to teach the English language and impart a knowledge of the laws and institutions of the country in the interests of good citizenship. In stipulating by contract that the contractors provide sanitary quarters, medical attendance and other facilities looking to the welfare of their employees, the Board established a precedent which is now pretty generally employed in all contracts for public work.

"It is notable that all the contracts, of a total value of $100,000,000, were completed by the original contractors or their legal representatives, without intervention by the City, at a cost approximately five per cent. less than the amounts bid.

"Within the scope of a report of this character it is impossible to treat of the many branches of related service which the building of the aqueduct entailed, as, for instance, the persistent annual efforts to secure legislation to prevent unwarranted discrimination in the matter of taxation against the City in the counties north of the City line; the treatment of the innumerable claims for direct and indirect damages which were presented against the City and which amounted to several millions of dollars, and to handle which a special bureau was organized to act in co-operation with the Corporation Counsel; the work of sanitation, involving surveys of miles of country north of the Ashokan reservoir and resulting in the amendment of existing health laws and the making and promulgation, in co-operation with the State Health Department, of an entirely new set of rules and regulations having for their object the promotion of the purity of the water supply; the installation of two aeration plants, composed of 1,600 fountains, at Ashokan and Kensico, as a further aid in purifying the supply.

"The taking of the Catskill waters has been so accomplished that the immediate regions from which the waters have been diverted have been benefited and beautified, rather than laid waste. Extensive highways of improved character, which are the pride of their localities, have been built by the City, sources of pollution affecting the general health have been cleaned up, and the dams and reservoirs have been so constructed that they enhance the beauties of the landscape. Moreover, all those whose property has been taken or damaged have received just, and even liberal, compensation.

"This new Catskill water supply is a gravity system. It has been made the means of connecting and combining all existing water systems. The aqueduct is, in fact, so interconnected with the old systems as to form a main trunk line, and thus the City, instead of being limited at any time to any one supply, will be enabled to utilize water from all its water sources in combination, thereby practically eliminating any possibility of a water famine.

"The plan and scope which controlled the building of the Catskill aqueduct were daring and magnificent, and many phases of the work have been absolutely without technical precedent. It may be said that the Catskill aqueduct is in a class by itself, and no other aqueduct, ancient or modern, approaches it in size and capacity. For this achievement the Chief Engineer and his staff should be awarded the greatest credit.

"The Commissioners of the Board of Water Supply have always recognized the fine spirit of self-sacrifice and loyalty which has characterized the entire organization since its inception, and made it possible to accomplish the results herein reported.

"Nor could this progress have been made without the support of the great Departments of the City of New York, the offices of the Mayor, Comptroller and Corporation Counsel, the Board of Estimate and Apportionment and the Municipal Civil Service Commission. To these must be added the great civic bodies of New York, for without the practical support frequently extended by them our progress would have been prejudiced and our work delayed.

"Thus the work is finished so far as the building of the reservoirs and the aqueduct for the delivery of the first instalment of water is concerned.

"To supply the remaining 250 million gallons per day to make up the total complement of 500 million gallons originally provided for, there remains the development of the Schoharie watershed by the construction of a dam at Gilboa and the building of a tunnel 18 miles long under the Shandaken Mountain. The

details of this operation, for which the Board of Water Supply has already laid the foundations, will be the subject of a future report.

"And now, Mr. Mayor, the Commissioners of the Board of Water Supply, on their own behalf and representing the Chief Engineer and his staff, and all the forces, administrative and engineering, which have contributed to this work, deliver to you this new Catskill Water Supply, the greatest system of municipal water works in all the world, to be enjoyed for all time by the citizens of New York.

CHAS. STRAUSS, President,
CHARLES N. CHADWICK,
JOHN F. GALVIN,
} Commissioners of the Board of Water Supply of The City of New York.

"Dated, New York,
October 12, 1917."

### Address by Mayor John Purroy Mitchel

Mayor Mitchel spoke as follows:

"Gentlemen of the Board of Water Supply, Major McClellan, Gentlemen of the Committee, and Ladies and Gentlemen of New York:

"It is with the utmost gratification that I receive this report from the hands of the members of the Board of Water Supply and accept, on behalf of the people of the city, delivery of this splendid system of waterworks.

"It was really a magnificent conception that gave birth to this great undertaking, the construction of a vast lake in the heart of the Catskill Mountains, a lake twelve miles long and in places two miles wide, with a depth of 190 feet and a capacity of 132,000,000,000 gallons.

"These are figures of which we can hardly conceive unless we see that body of water lying there in the valley that has been turned by the genius of the staff of the Board of Water Supply into a great lake.

"That lake, created by the construction of what I believe is the most remarkable dam to be found anywhere in the world, consisting as it does of a vast mass of masonry, blocking the old gorge of the Esopus Creek and flanked by earth dykes at points 120 feet high, four miles long — that lake, feeding as it does into an aqueduct that runs 120 miles through inverted siphons,

crossing the valleys of the Walkill and the Rondout and the Hudson (inverted siphons that cross the Hudson running 1,200 feet beneath the river bed in the solid rock and coming up on the eastern side in the heart of a great mountain) then passing as it does from the Hill View reservoir down and through the very back-bone of the Island of Manhattan and beneath the East River into the Borough of Brooklyn: A wonderful undertaking, an undertaking that required a bigness of conception that is not met with often in public undertakings.

"Ladies and gentlemen, for the organization of this great enterprise, for the legislation that made it possible, for its administration during the early years when mistakes would have wrecked it, and when opposition might have rendered it impossible forever, the people of New York will render their lasting and their sincere thanks to Mayor McClellan, who is in very truth the official father of this whole enterprise and undertaking.

"You remember, as Mr. Morgan has said, how, when this matter was in discussion, the Legislature, trying as it sometimes does, to find reasons not to relieve the necessities of the City of New York, raised a question of the political use of the appointments to membership upon this Board, Mayor McClellan voluntarily made the promise that these men would be selected from lists furnished to him by the great representative civic organizations of the city. That pledge he kept in every particular in the original appointments and in the appointments of those who succeeded the members who resigned.

"That pledge was one of the contributing facts to the success of this great enterprise, but behind it Mayor McClellan put all the untiring energy of his own character and the force and power of the office of mayor, and it was he, working behind and with the Board of Water Supply, who brought this great project to fruition for the people of the city.

"Well, the first stage of the work is finished. We have watched it grow; I have lived myself with this undertaking from its very beginning, first, as a part of Mayor McClellan's administration, then as member of the Board of Estimate, when we authorized those changes in the estimates and contracts that made possible the tunnel that leads now down through the back-bone of Manhattan Island; and during the last four years as Mayor, endeavoring as far as in my power lay to assist in carrying this work to completion.

"But, ladies and gentlemen, let me point out and emphasize again what has been said both by Mr. Morgan and by President Strauss, that the real conduct of this work, the engineering conception, the organization of staff, the making of plans, the direc-

tions of the work, has lain in the hands of the Chief Engineer of the Board of Water Supply.

"Great has been the contribution, the executive direction, the business judgment on the part of the members of the Board of Water Supply, and for that the people of the city will thank them through future generations, but, gentlemen, never has there been a bolder engineering conception or a more capable execution than that of Chief Engineer Waldo Smith in this great enterprise.

"It has been said that this work is apart, of a class by itself. True. It equals in its magnitude, or it approaches in its magnitude, the construction of the Panama Canal; but in the difficulties, the engineering difficulties of its conception and its execution, in my judgment, it exceeds the Panama Canal.

"One contribution that the Chief Engineer has made and which those who have not followed this undertaking closely might overlook, was the organization of the engineering staff. Nowhere in the government of this city or in the government of any other city, nowhere, I believe, either in or out of government, has there been gathered together a staff of engineers of greater individual capacity or with more loyal spirit or devoted purpose to make a success of a great accomplishment undertaken. The staff of the Board of Water Supply has backed up its Chief Engineer and its Commission and has carried this great work to a successful conclusion. Let us give to these men full recognition for the splendid service that they have rendered to the city.

"Perhaps more than anything else the people of the city, the Board, its Chief Engineer, and its staff, have to congratulate themselves to-day upon the fact that this vast undertaking, this difficult undertaking, this undertaking that has consumed nearly ten years, has been conceived in honesty and executed in complete honesty.

"It is indeed a great achievement and a mark of distinction upon which these men who have carried on this great work and those who have dealt with them as contractors, may congratulate themselves to-day.

"And now, ladies and gentlemen, let me say to you how great a personal satisfaction and pleasure it is to me, as I know it must be to you, to welcome back again into the City Hall, that he must find so familiar, Major McClellan.

"It was my privilege to begin public service under him as a member of his administration, as Commissioner of Accounts. The two years and a half that I served under him in that office were perhaps the most satisfactory that I have ever known in public life. There was definite objective and definite accomplishment; objective and accomplishment that would have been both impos-

sible had it not been for the unfailing and constant support of the Mayor, who was always behind me in that work.

"Ladies and gentlemen, in an administration which gave to the city many great public works, there was nothing conceived, undertaken or accomplished that ranks with this great system of water supply that comes from the Catskill Mountains. It was his contribution in that matter — it is this finished public work that will stand as the greatest monument to Mayor McClellan and his administration in the City of New York.

"I have the honor and the pleasure of presenting to you Major McClellan."

### Address by Major George B. McClellan

Ex-Mayor McClellan, in the khaki uniform of the United States service, spoke as follows:

"Your Honor, I scarecely know how to express my appreciation, my thanks, for what you have said of me. I can only say that you have exaggerated, in the kindness of your heart and of your courtesy, my part in the inauguration of the Catskill Water Supply System.

"I like to feel that any one of the 168 mayors this city has had would have risen to the emergency as well as I did. It was simply that I happened to be the man upon the spot. But there is one thing that I take credit to myself for having done, and that is in the selection of the men to do the actual work; for, as has been said here repeatedly to-day and as cannot be said too often, no city has ever been more devotedly or ably served than this city will have been by the men who have wrought the work we are bringing to conclusion to-day.

"Nearly fourteen years ago — for you will pardon me if I indulge in a little ancient history, too — nearly fourteen years ago when I first became mayor of this town, I found that the city needed badly an additional water supply system and a new system of sewers. Both projects would have cost upwards of $300,000,000 — in these days when we think of billions, an insignificant sum, but in the prehistoric period of which I speak, a sum of enormous magnitude, beyond the means of the time.

"I had to choose between the two. An additional water supply was the most vital necessity, and besides, for some reason or other, the construction of a water supply system appealed to me more than did the construction of sewers, so I left the latter to the respectful consideration of my successors, where it has ever since remained.

"Under the late Mayor Low, Robert Grier Monroe, his Commissioner of Water Supply, Gas and Electricity, with rare foresight and imagination, first among public officials recognized the necessity of increasing the water supply if New York was to maintain her place among the great cities of the earth. Accordingly, he appointed the commission that Mr. Strauss has spoken of, consisting of three engineers of international reputation, Messrs. Burr, Hering and Freeman, who, just before I took office, had submitted an exceedingly valuable report.

"The report suggested three possible additional sources of water supply: the watershed to the east of the Hudson, the Hudson River itself, and the Catskills. The first project, the water supply possibly derived from the watershed to the east of the Hudson, was so fraught with interstate complications as to be practically useless. The Hudson River was as costly as was the Catskill project, and besides, drinking water ought to be something more than good to look at. Its character ought to be above suspicion. Accordingly, I turned my back upon the Hudson and went to the Catskills, and I don't think that New York has had any cause to regret my choice.

"Having made up my mind what I intended to do, it next became necessary to obtain the legislation to permit me to do it. You men and women of to-day who accept the Catskill water supply system as a beneficent necessity, as a matter of course, have no conception of the amount of effort and time required to inaugurate it. It took two years of constant hard fighting to get the Legislature to give us the act we needed.

"The thanks of the community are due to the New York *Times,* the Brooklyn *Daily Eagle,* the Merchants' Association, under the leadership of Mr. Towne, the Chamber of Commerce, under the leadership of its then President, Mr. Simmons; and the Manufacturers' Association, under the leadership of Commissioner Chadwick — who I am glad to know is still with us as full of vigor, enthusiasm and usefulness as ever — for the constant support they gave the then Mayor.

"On the other hand, a great many newspapers and a great many individuals who ought to have known better, and probably did, who have since been converted to enthusiastic support of the work, opposed it in the beginning, tooth and nail, as unnecessary, utopian and criminally extravagant. The amount of mud that was thrown at me for having begun the work, if submitted in somewhat different form, would have furnished sufficient material with which to have built the great Ashokan dam.

"It is only fair, however, to say that many of these opponents opposed the work on general principles, as they oppose anything

and everything begun by the city's mayor, and after a beginning has been made, abuse him heartily because he has not begun it sooner: a psychological phenomenon of no little interest, worthy of more study than it has yet received, and with which doubtless my distinguished successor is not altogether unfamiliar.

"Having secured the legislation that was necessary, the rest of my work was comparatively easy. As has been told you, I asked lists of three names from three leading civic organizations, and from those lists appointed Mr. Simmons (whose place was later taken by Mr. Bensel), Mr. Chadwick and Mr. Shaw. They began their work under the most favorable auspices. They were business men of wide experience. They had the moral and the active support of three great civic organizations and they had the confidence of the public.

"In the very beginning I was so fortunate as to secure the services of one of the most distinguished hydraulic engineers in the United States, as he was then — the most distinguished, as he has since become — J. Waldo Smith.

"He surrounded himself with a brilliant staff who, as the work neared completion, went out into the world and carried far and wide the traditions of their chief — Merritt Smith, now Colonel of the 1st New York Field Artillery; Robert Ridgway, Chief Engineer of the Public Service Commission, now consultant of the new rapid transit system in Chicago; Carleton Davis and a score of others.

"When I began the actual physical work over a decade ago by turning the first sod, I announced that so far as I could do it, I intended to make the work a model for all time of what a public work ought to be. I expressed the wish that from start to finish, the work should proceed free from politics, free from waste, free from scandal. I thank God that my wish has come true.

"My successors in the mayoralty and the successive Boards of Water Supply, with great judgment and wisdom, have left the purely technical matters in the hands of the engineering force untrammelled and unrestricted, and the result has been one the like of which the world cannot show, the greatest engineering feat in history, because so I think it is, carried to its conclusion without a single labor disturbance, within the estimated time and cost, free from a single hitch, free from a single scandal.

"New York has good cause to be proud of what she has done, and the reason why this has been so is because the public has believed that the work was being carried on efficiently and honestly, because the public has had confidence in the men in charge of the work.

"There is a disposition among some of us, especially those of us who wear the uniform, to forget that when this war is over, when, thanks to American bravery, American enterprise, and American brains, our arms shall have triumphed gloriously and we shall have won the war, a time will come that will try men's souls almost as much as the dark days that will have gone before. It will take just as much courage, just as much energy, just as much devotion to retain the paramount place among the nations that we shall win in and because of the war, as the attainment has cost us.

"We who have followed our great President in the past, who are following him to-day, unitedly, devotedly and loyally, because we know that he is right, will continue to follow him in the peaceful days to come just as we are following him now in war-time, in the restoration of our normal conditions and in the reconstruction of our normal life.

"It is to New York that our President and that the people of the United States will turn for inspiration in the peaceful days to come, just as they are receiving her support now and have received it in the days gone by. If New York is to bear her share and do her part in the work of reconstruction, she must carry on the ordinary affairs of life side by side with her intensive and enthusiastic preparation for the war.

"Those of us who are fortunate enough to be serving in the army of the United States have been singularly honored, but we are serving our country no more devotedly and no better than you who wear civilian dress, who, by carrying on the work of the community, the ordinary, everyday, humdrum life of America, are making it possible for the army to win the war; and when the war has been won, to bring back the peaceful conditions that have gone before.

"A great work like this, whose completion we are celebrating to-day, is of incalculable value as an object lesson and as an inspiration. If American grit and American genius can achieve the greatest engineering feat in history by bringing a mighty stream over hill and dale, through mountains and under rivers, from the Catskills to the sea; if the American spirit that its engineers possessed could accomplish the impossible because of the faith that was in them, a belief in themselves and in their cause, that same American spirit, true to itself and its traditions, will and can carry the flag that speaks for the cause we love to victory complete and lasting; and when that victory has been won, will plant it firmly and forever as the emblem of all that this nation of ours represents that is best in success, in achievement, in progress, in civilization, in righteousness, and in liberty, justice and in truth."

### Reception in Honor of the Board of Water Supply

Mr. Morgan then said:

"Ladies and Gentlemen: An opportunity will now be offered to all those who are here to meet the Board of Water Supply; and the exercises will conclude with an exhibition of moving pictures illustrating the work of the Board."

For half an hour, those present pressed forward and offered their congratulations to the Commissioners.

### Exhibition of Moving Pictures

In conclusion, a series of motion pictures illustrating the Catskill Aqueduct was projected on the screen back of the rostrum. These pictures, which, as will appear later, were exhibited elsewhere several times during the celebration, were a highly interesting and instructive feature of the commemoration. They were made on the initative of Hon. Arthur Williams, Chairman of the Executive Committee of the Mayor's Catskill Aqueduct Celebration Committee, by the photographic service of the New York Edison Co., of which Mr. Williams is General Commercial Manager, and were an example alike of the Chairman's enthusiasm in making the celebration a success and of the generosity of the New York Edison Co. With the co-operation of the Board of Water Supply, Mr. Williams and the photographers had gone over the route of the aqueduct, taking motion pictures of Commissioners and engineers at work, the reservoirs, the aerating plant in operation, the splendid scenery, and other features of the great work, which, when projected on the screen, brought the achievement to the understanding in a manner more effective in some respects than the spoken word or printed page. A clever feature was the map of the Catskill aqueduct, from the mountains to the city, on which the water was seen to start from the Ashokan reservoir and flow along the route of the aqueduct until it reached New York.

# CHAPTER III

## THE JET FOUNTAIN IN CENTRAL PARK

### The Catskill Water Formally Turned On

The function of formally turning on the Catskill water, which could not be held in City Hall Park on account of the delay in completion of the Angelina Crane fountain, mentioned on page 821 preceding, took place in the upper reservoir in Central Park at 3.30 p. m. on Friday, October 12, 1917. The ceremony was more spectacular and possibly more significant than if the water had been turned on at a fountain in City Hall Park, for the jet fountain rose to a height of 115 feet, and the Catskill water, in falling, mingled with that of the out-grown Croton aqueduct system. The scene, with the large expanse of water sometimes called Lake Manahatta, and the surroundings of trees and lawns, was much more picturesque than it could have been in City Hall Park. (See plates 27 and 28.)

The jet fountain, the gift of an anonymous donor, was installed at a cost of about $10,000 at the lower end of the reservoir about at a point where the line of 88th street, if projected, would intersect a north and south line about equidistant between the lines of Sixth and Seventh avenues if projected. This point lies in line with the axis of the old Croton reservoir lying to the southward, and was so located that it might form a part of the general composition of the proposed treatment of the latter for a permanent memorial of the Catskill aqueduct. (See chapter X following.)

The invitation to the jet fountain ceremony, and the pageant which followed, read as follows:

{ Seal of } { the City }

The Mayor of the City of New York
and the Mayor's
Catskill Aqueduct Celebration Committee
request the honor of your presence
at the formal turning on of the water of the
Catskill Aqueduct

and at the ceremonies in celebration of its completion
on the afternoon of Friday, the twelfth of October
One thousand, nine hundred and seventeen
in Central Park
Brief exercises on the Eighty-sixth Street embankment of the Upper Reservoir at half after three o'clock
Pageant on the Sheep Meadow west of the Mall at quarter before four o'clock

Notwithstanding the threatening weather, a large company gathered on the southern embankment of the reservoir, awaiting the arrival of the official party with Mayor Mitchel, who had just been reviewing the Columbus Day parade.

Upon the arrival of the Mayor, the Hon. William Williams, Commissioner of Water Supply, Gas and Electricity, spoke as follows:

"Mr. Mayor and Fellow Citizens:

"The Department of Water Supply, Gas and Electricity, which is charged with the operation and care of the water supply system of New York, has desired to make a separate contribution toward the commemoration of the great event we are celebrating to-day — the recent introduction of Catskill water into all the boroughs of the City of New York. With this object in view it has seemed appropriate to construct a jet fountain to be supplied by Catskill water. We have placed it in the large Central Park reservoir which contains Croton water. The central jet will through the Catskill pressure rise to a height of 115 feet above the surface of the reservoir. It may serve as a symbol of the new water supply and will illustrate in an interesting way how much greater is the Catskill than the Croton pressure; for the available Croton pressure is shown by the elevation of the water surface now before us.

"The Department has been able to carry out its plan, thanks to the generosity of a public-spirited resident of New York. The fountain is an object of great beauty in itself; furthermore, it is located on the extension of the main axis of the rectangular reservoir lying immediately to the south, which reservoir will shortly be abandoned and converted into park space, and later a beautiful view of the jet will be obtained therefrom through the trees.

"The fountain is now ready for operation. I ask you, Mr. Mayor, to accept it on behalf of the City and to set its waters in motion."

Mayor Mitchel replied as follows:

"Mr. Commissioner, Gentlemen of the Board of Water Supply, Ladies and Gentlemen: On behalf of the City, I am very glad to accept this fountain, which will perpetually serve as a reminder of the completion of this enormous and memorable public work; public work which was conceived by and executed in honesty, and with a capacity which has seldom been equaled in any branch of public service.

"This morning I had the privilege of accepting formally the transfer of the works at the hands of the members of the Board of Water Supply, congratulating them and their Chief Engineer, who has conceived and directed the engineering work, and members of their staff, and now I am glad, Mr. Commissioner, to accept this memorial from your hands to commemorate the completion of this notable public work."

Mayor Mitchel then stepped to the large T-shaped handle which connected with a subterranean valve, and as he slowly turned it there was first a gentle agitation of the surface of the water of the reservoir north of the embankment, which sent concentric waves rippling in every direction. Then at a point above the submerged works of the fountain, an active ebullition ensued, increasing in force until a large jet of water began gradually to rise into the air like a great white plume until it reached a height of 115 feet. It so nearly resembled a geyser in the Yellowstone National Park that the similitude to Old Faithful was strongly suggested, and the fountain was informally called the Old Faithful of Central Park. This title is more appropriate in one sense than that of its prototype, for while the Yellowstone geyser is intermittent, the Central Park fountain is continuous. As the water of the jet falls back into the reservoir, it is not wasted, but is still available for domestic use, and in the operation tends to aerate and in a minor degree improve the water of the reservoir.

After the brief ceremonies at the upper reservoir, the official party proceeded to the Sheep Meadow, where the pageant had already been begun.

# CHAPTER IV

## ALLEGORICAL PAGEANT IN CENTRAL PARK

### "The Good Gift of Water"

While the ceremonies at the jet fountain were taking place, an allegorical pageant entitled "The Good Gift of Water," written by Edward Hagaman Hall, L. H. D., was begun on the Sheep Meadow of Central Park under the direction of Mr. William J. Lee, Supervisor of Recreation of the Department of Parks, and Miss Mary E. McKenna and Mr. John J. McCormack, his assistants. Mr. Lee, whose abilities to conduct out-door exercises employing large numbers of children have been demonstrated many times in connection with the Mayor's Independence Day celebrations and other festival occasions, for many years, was Chairman of the Pageant Committee of the Mayor's Catskill Aqueduct Celebration Committee. He had the co-operation of 75 men and women as members of his committee, as follows:

WILLIAM J. LEE, Chairman
Miss MARY MCKENNA, Secretary

Hon. Robert Adamson
Louis Annin Ames
Edward A. Arnold
Leo Arnstein
Mrs. Madelon S. Bacon
Hon. George Gordon Battle
Hon. Daniel M. Bedell
Miss Anna D. Chairs
Robert Grier Cooke
Dr. C. Ward Crampton
Mrs. Joseph W. Cushman
Walter T. Diack
Joseph P. Donnelly
Hon. Frank L. Dowling
John J. Downing
Miss Augusta Drake
Miss Martha L. Draper
Dr. John L. Elliot
Prof. Henry T. Fleck
Edward W. Forrest
Hon. John J. Freschi
Eugene C. Gibney
Dr. Luther H. Gulick
Charles T. Gwynne
Ernest Harvier
Nathan Hirsch
Miss Gertrude E. Hutchinson
Hon. Raymond V. Ingersoll
Joseph E. Keene
John T. Kelly
Dr. George Frederick Kunz
Miss Caroline Lewis
Hon. Marcus M. Marks
Miss Catherine A. McCann
John J. McCormack
Richard W. Meade
S. C. Mead
Hon. Herman Metz

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| Dr. Sidney E. Mezes | W. S. Stewart |
| J. Edward Morse | Mrs. Algernon S. Sullivan |
| Miss Sadie R. Naftelen | Hon. John L. Tildsley |
| John P. O'Brien | Robert F. Volentine |
| Miss Emily O'Keefe | Miss Lillian Wald |
| Mrs. Fannie G. Parsons | Miss Mary Walsh |
| Nathaniel Phillips | Hon. John E. Weier |
| Hon. William A. Prendergast | Mrs. J. Wells Wentworth |
| J. Coll Price | James E. West |
| Mrs. Laura B. Prisk | Hon. Thomas W. Whittle |
| Abraham Shiman | Hon. William G. Willcox |
| Mrs. Mary K. Simkhovitch | Hon. William Williams |
| Rev. Joseph F. Smith | Gen. George W. Wingate |
| Prof. Edmund B. Southwick | Sidney M. Wittner |
| Mrs. James Speyer | Hon. Arthur Woods |
| Miss Madeline L. Stevens | Miss Margaret E. Young |

The scene of the pageant, the Sheep Meadow so-called, lies between the West Drive and the Mall, and the lines of 66th and 72d streets. Seats for spectators were erected at the south end of the meadow, and the scenic accessories of the pageant were at the north end, while the sides of the pageant enclosure were bordered by poles upon which were pennants of various national colors. It is estimated that 50,000 persons gathered to witness the pageant, in which, according to Mr. Lee's report, 5,000 school children took part. Among the participants were groups from the Parks and Playgrounds Association, the Boy Scouts of America, the Public School Athletic League, the American Junior Naval and Marine Scouts, the Camp Fire Girls, the College of the City of New York, the New York Council of Girl Scouts, the City History Club, the Foreign Born Citizens League, and the DeWitt Clinton High School Chorus. Music was furnished by Ward's Military Band and the scenic effects, properties and decorations were by Mr. William F. Hamilton.

The procession of pageant players formed at the 12th regiment armory at 61st street, with its head at Columbus avenue, and marched south on Columbus avenue to 60th street, east to Central Park West, north to the 72d street entrance of Central Park, east and south through the park and down the Mall to the Sheep Meadow. The order of procession was as follows:

Mounted Police
Guard of Honor
The Boy Scouts of America under the command of H. A. Gordon, Scout Executive, and G. H. Nesslage, Field Scout Executive

Director of Pageant
William J. Lee

Standard Bearer and Escorts

Ward's Military Band

Indian Group
Represented by the DeWitt Clinton, Chelsea and Riverside Park Playgrounds, the West 28th Street Gymnasium, and the Camp Fire Girls

The Gift of Water for Food
Represented by the Thomas Jefferson, Yorkville, Carl Schurz, John Jay, Mt. Morris, St. Gabriel's and Ryan Park Playgrounds and the East 54th Street Gymnasium

The Gift of Water for Drink
Represented by the Tompkins Square, Hamilton Fish, Five Points, East 12th and East 17th Street Park Playgrounds

The Gift of Water for Health
Represented by the Carmansville, Colonial and Astor Park Playgrounds

The Gift of Water for Fire Protection
Represented by the Five Points, Corlears Hook, Hamilton Fish and Seward Park Playgrounds, and the Cherry Street, Oliver Street and Rutgers Place Gymnasiums

The Gift of Water for Industry and Commerce
Represented by the Tompkins Square, Corlears Hook, West 18th Street, Hudson and Central Park Playgrounds, and the East 54th Street Gymnasium

The Mountains Giving Water to the City
Represented by the Chelsea, East 67th Street, Thomas Jefferson, Yorkville, Corlears Hook and Park Playgrounds, and the East 54th Street Gymnasium

New York Council of Girl Scouts
City History Club

Public Schools Athletic League

Boys and Girls of City Park Playgrounds

Students of the College of the City of New York

Foreign Born Citizens' League

American Junior Naval and Marine Scouts
Under command of Maj.-Gen. Daniel M. Bedell

Band of Public School No. 21
Under command of A. J. Pugliese, Principal

Upon arrival at the Sheep Meadow, the pageant players formed a crescent and the standard bearer proceeded to the center of the green, accompanied by the figures of George Washington, Miss Columbia, Uncle Sam, Miss Liberty, Christopher Columbus, and Father Knickerbocker. All pledged allegiance to the flag and sang the national anthem.

The performance of the pageant was then begun, and was to have been followed by the following events:

Address, by Mayor John Purroy Mitchel.
Signal Drill, by Boy Scouts of America.
Folk Dances, by the Girls' Branch of the Public Schools Athletic League, from P. S. No. 17, Manhattan.
Setting-up Drill, by American-Junior Naval and Marine Scouts.
Song, "Good-Bye Broadway, Hello France," by James Flynn.
Finale, "America," by all.

Unfortunately, after the commencement of the pageant, it began to rain, and the down-pour became so great that the conclusion of the performance had to be abandoned.*

Following is the outline of the pageant as it was proposed to be performed:

### The Pageant

The pageant, as distinguished from a parade, has in recent years come to be recognized in America, as for years it has been recognized abroad, as a very effective form of educational commemoration. The historical facts and civic and moral lessons of the Catskill aqueduct were readily susceptible of expression in this form of art, and with a view to such performances, either in an unpretentious way by school-children or on a more elaborate scale by others, the following suggestions for a pageant entitled "The Good Gift of Water" were prepared.

The pageant consists of a Prologue, five Episodes or Allegories, and an Epilogue.

The Prologue represents man's prime need of water to sustain life, and the universal prayer which all races and creeds of all

* It was an amusing coincidence, and the subject of considerable good-natured joking, that the heavens so promptly responded to the "Universal Prayer for Rain" of the Prologue.

ages, from the aborigines to the present time, have lifted up to Heaven for water.

The five Allegories depict the five great uses of water. The first symbolizes the gift of water for food production, at the same time typifying the manner in which Nature gives water to man. The second symbolizes the gift of water for drink, and the curse of drunkenness. The third represents the gift of water for health; in this are included the general ideas of personal cleanliness, domestic hygiene and public sanitation. The fourth represents the use of water for fire extinguishment. And the fifth typifies the use of water for power, its use in the industries, and its function in bearing commerce.

The Epilogue represents the city sending to the mountains for water; the building of the aqueduct; Ashokan giving water to the city; and the distribution of the water to the five Boroughs; the whole concluding with a choral ascription of praise to God from whom all blessings flow.

The mechanical arrangements contemplate the erection at one end of the enclosure (called hereafter the "left") of a stage, simulating a natural elevated plateau of rocks and earth, upon which there is a throne with seats for the principal characters. The painted background in the first Allegory is simply sky and light clouds; in the other scenes it is sky and trees. On the plateau is a small fountain and basin, the overflowing water of which falls into a pool located on the ground in front of the stage. Back of the pool, under the stage, is a grotto, the abode of the Water Spirits.

At the opposite end of the enclosure (called the "right") is a mountain, the abode of Ashokan.

Midway between the stage and Mountain (called the "center") the Prologue calls for a few Indian wigwams; and the third and fourth Allegories for a cluster of cottages to represent a village.

The other mechanical requirements are suggested by the text.

The whole is susceptible of the most beautiful lighting effects, if produced at night, as, for instance, in the first Allegory in which the Clouds take on different hues. If the pageant be produced in the daytime, the references to changing lights are to be disregarded.

### Prologue: The Universal Prayer

The Prologue represents in the middle ground (center) an Indian village on Manhattan Island, in the month of the Planting Moon. The inhabitants are engaged in various domestic occupations. The Sachem calls them together and announces that Planting Time has come. They take down ears of corn which hang on their wigwams, shell the corn, and soak the kernels in water. With their wooden hoes and pointed sticks they plant the corn. Then they gather and have a Rain Dance and a Corn Planting Dance, looking upward and lifting up their hands to the skies, praying for rain. When their ceremonies are over, they sit upon the ground around their camp-fires.

The action shifts to a distant elevation (the left), upon which an altar has been raised. Priests of different races, ancient and modern, in their robes of office, appear before it and pray for rain. The Babylonian priest sets up his Fish-God, symbolizing, in their ancient belief, the union of Wisdom and Water; and other priests set up their respective divinities or symbols and chant their supplications.

The Indians, hearing the distant music, steal toward it, and, gathering at the foot of the eminence, join in the Universal Prayer, which all men of all ages have offered to Heaven for the Good Gift of Water to meet the Universal Need.

### First Allegory: The Gift of Water for Food

The Sun, dressed in splendor, enters, riding in a golden chariot. His horses are led by the Hours; he is attended by the four Winds and is followed by the four Seasons. He rides around the earth and ascends his shining throne (left). He has heard the prayers of men for rain and sends the four Winds to bring the Clouds. The Clouds, in light flowing draperies and carrying little vases or goblets of water, come at his bidding. They dance toward him in groups, taking on various hues as they gradually approach his throne. They ascend the eminence on which he is elevated and gather around him so closely that they obscure his light and they themselves become dark.* At the signal

* This effect may be produced by lessening the illumination if produced by night, or by having the outer clouds in darker draperies if represented by daylight.

of thunder peal and lightning flash, the Clouds break away and the Sun reappears. The Clouds go flying down to the earth, emptying their vases and growing brighter as they go. Then the Corn-Maidens and the Flower Maidens (who have been lying on the ground concealed under brown mantles) spring up, throw off their earthy coverings, and with corn-stalks and sheaves of flowers in their hands, dance in the sun-light and make glad the earth.

### Second Allegory: The Gift of Water for Drink

Upon the eminence at one end of the enclosure (left) is a fountain with a background of trees. Its overflowing waters fall into a pool upon the ground below. Behind the pool is a grotto. Beside the fountain on the eminence are two Ministering Spirits. Around the pool below and in the grotto are many Water Spirits. A procession, symbolizing Humanity, slowly approaches the eminence in single file, ascends at one side, partakes of the refreshing waters, passes on and descends on the other side. In the procession is a traveller leaning heavily on his staff; a horseman leading his jaded steed; a drover leading his thirsty ox; a husbandman with scythe over his shoulder wiping his brow; a woman with babe in her arms; a man with a burden on his back, etc. Some sit a moment by the fountain while the Ministering Spirits bathe their brows. All drink the water offered by the Spirits and resume their journey refreshed.

The scene shifts to the middle of the enclosure (center) and reveals a Bacchanalian orgie. The god of Strong Drink, surrounded by Satyrs, is leading slovenly-clothed men and women in a drunken revel. They dance and drink, quarrel and fight. One man strikes another down, symbolizing crime. The men and women gradually fall from exhaustion and inebriety. Bacchus and the Satyrs dance in glee around their victims.

The Water Spirits go to the rescue. They surge toward the Evil Ones, and the opposing forces sway back and forth alternately striving for the spiritual mastery. At length the Water Spirits succeed in forming a ring around the fallen ones, and the Evil Spirits, with a cry of defeat, flee into darkness. The Water Spirits bring water, bathe the brows of the fallen and give them water to drink. When the prostrate ones drink, they rise from

the ground, their bad habits — typified by spoiled garments — fall away; they appear transformed; and all join in a dance of thanksgiving.

### Third Allegory: The Gift of Water for Health

At one end of the enclosure (left) Hygeia, the goddess of Health, and her father Æsculapius, in white robes, sit upon an elevation by a fountain of healing waters. Around the pool and in the grotto below are Water Spirits.

At the opposite end of the enclosure (right) two cloaked and hooded figures squat upon a heap of earth: The one in the gray cloak is Disease. The one in the black cloak, whose face looks like a skull, is Death. Their cloaks are supposed to make them invisible.

Between the two extremities (center) is a little village. The villagers are indolent and negligent. The men lounge and smoke; the women gossip. Then they go to an open space somewhat apart from their cottages and have folk-dances.

While the villagers are making merry, repulsive figures, half beast and half human, representing Filth in various forms, crawl out of little hovels by the houses. Some wallow in the village street; some bespatter the houses with mud; some rummage among and overturn the waste receptacles; some crawl in windows and doors and come out again. They keep this up while the villagers are dancing and then lie down like dogs by the houses.

The villagers return but do not drive off the filthy beasts.

Then Disease and Death, in their invisible cloaks, stalk through the village, touching the door-posts, and pass out of sight.

Presently the women come out of one cottage and wring their hands and lament. Other villagers come out of their houses and joint their lamentations. The wisest man of the village, he with a long beard, gives them counsel, and then goes as a messenger for Æsculapius. While he is absent, the sick on their sick-beds are brought out into the village street.

The white-robed physician leads Hygeia to the village. They are followed by the Water Spirits carrying basins of water. They kill the Filth beasts by sprinkling and the dead beasts are dragged out of the village. Then the street is sprinkled from the

basins, and the Water Spirits hold the basins while the villagers bathe their faces and hands. All then form a procession and, carrying the sick-cots, go to the Pool of Health where the sick are healed and a dance of rejoicing is held.

**Fourth Allegory: The Gift of Water for Protection from Fire**

Around the pool at one end of the enclosure (left) the Water Spirits, carrying voluminous loose draperies of light green color, sit and stand. They sport among themselves and splash in the water.

At the opposite end of the enclosure (right) a group of Fire Fiends, dressed in red, with red bat-like wings, sit, stand and make sport around a bonfire. They play with torches and fire-brands.

Between the two groups (center) is a cottage occupied by a happy family. The father labors in the field. An elder daughter spins before the door. The children play games. The mother goes in and out about her household duties, cooking the family meal. Light smoke curls from the chimney.

The chief of the Fire Fiends steals toward the cottage, beckoning to his fellows to follow. The first one fastens himself with his outspread hooked wings upon the side of the little house. The chimney smoke increases. Another Fiend approaches followed by more. The mother discovers them and gives a cry of alarm. The family try to beat off the Fiends but more come to the attack. Other villagers join in the fight but are unable to drive the enemy away. A play of lurid light seems to foretell the doom of the house.

Then some of the villagers run toward the pool calling on the Water Spirits for help. The latter rush to the rescue. The Fire Fiends and the Water Spirits surge back and forth, the latter trying to envelope the former in the folds of their loose draperies. At length, the Fiends are surrounded, completely enveloped in the green folds of Water, and are smothered. They fall dying to the ground, covered by the green mantles. The villagers rejoice at their delivery.

**Fifth Allegory: The Gift of Water for Industry and Commerce**

Two figures, symbolizing Industry and Commerce, sit upon a throne (left) as presiding geniuses of the scene Bales of goods, wheels of machinery, and other objects lie at their feet.

By the pool near the throne is a mill, with a water-wheel, representing the use of water in Industry. The water-wheel turns and electric lights begin to glow in a halo above the heads of Industry and Commerce. Men go into the mill carrying burdens of materials.

The procession of Commerce enters the enclosure in four groups and approaches the mill. First is a group of Indians bearing a canoe on their shoulders. They are encircled by dancing Water Spirits, now representing Waves. The Waves carry between each other voluminous green draperies which they gently undulate. The group bears the canoe to the mill where it receives a cargo, presumably corn meal, and passes along. Next comes a group of old time sailors, bearing on their shoulders a sailing vessel. They are likewise surrounded by dancing Waves. They halt at the mill, receive their cargo, and pass along. In like manner a third group of men bearing a steamboat, and a fourth group in the uniform of the Navy bearing a warship, both surrounded by Waves, approach, receive their cargoes, and follow their predecessors. The procession circles the enclosure and gathers in the middle. Each vessel is set upon the ground, which has been previously covered with green cloth to represent water. The Indians gather around the canoe and the sailors gather around their respective ships. The Waves form a circle around all, holding their green draperies between each other and keeping them in gentle motion. The Indians and the groups of sailors each in turn have a characteristic dance.

A fifth group of Waves now enters the enclosure, dancing and bringing Peace and Plenty in their midst. Peace, with a dove on her shoulder, carries two laurel wreaths in her hands. Plenty carries a cornucopia of abundance. As they go around the enclosure, the first four groups follow in their train and all proceed to the foot of the throne (left). Peace and Plenty ascend, the former laying wreaths on the heads of Industry and Commerce, the latter emptying her cornucopia at their feet. In the groups below,

the Waves are outermost, dancing and gently waving their green draperies.

### Epilogue: The Mountains Give Water to the City

Enthroned upon an elevation at one end of the enclosure (left) sit five classically draped female figures, symbolizing the five Boroughs of Greater New York.* Festoons of flowers unite them. Above them presides the Mayor, wearing a gown as Chief Magistrate of the City. A little below them, on the same elevated place, sit three Commissioners of Water Supply in conference. Near them are engineers studying maps with surveying instruments by their sides, and draftsmen with compasses and rulers drawing plans.

At the opposite end of the enclosure (right) upon a mountain, sits an Indian chief, personifying Ashokan, and typifying the Spirit of the Mountains. About him, little Brownie-like Mountain Sprites gambol. They bring him water to drink and he drinks some, but there is more than he needs and he motions them to go away.

After due deliberation by the Water Commissioners and engineers, the chief Commissioner arises and addresses the Mayor, pointing frequently toward the Mountain. The Mayor nods assent and hands him a scroll containing a command to go to the Mountain and seek Water. A procession starts for the Mountain. First go the Commissioners; next the engineers who measure the ground as they go and set up little stakes or flags to mark the route; and next a few workmen with picks and shovels on their shoulders.

Arriving at the Mountain, the scroll is read to Ashokan. He nods his assent, claps his hands and the Mountain Sprites bring him a large Indian jar. The Sprites disappear and return with gourds or small jars of water which they empty into the large jar.

The Commissioners clap their hands and motion to the engineers and workmen to proceed with their task. The Commissioners remain with Ashokan; the engineers and workmen slowly

* See group on the obverse of the Greater New York Medal, 1898, designed by the writer.

retrace their steps toward the City, the workmen striking the ground with their picks and shovels.

As they proceed, the Aqueduct Spirits (who formerly represented the Water Spirits) come trooping into the enclosure, bringing large circlets or hoops decorated with flowers. Some roll their hoops, others skip with them. They go through various picturesque evolutions and finally form a line beginning at the Mountain and stretching toward the City. They hold their hoops in a row, forming the outline of a tube. The Commissioners, Ashokan bearing the jar of water, and the Mountain Sprites descend and pass through the Aqueduct,* to the City. Ashokan delivers the water-jar to the Mayor who, in turn, pours out five gobletfuls of water and delivers them to the five Boroughs. The Boroughs rise and drink, and all present join in the final chorale, "Praise God from whom all blessings flow."

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* If preferred, the Aqueduct Spirits may carry long flexible wands instead of hoops, and, standing in double file, form an archway with their wands to represent the Aqueduct. If there are not enough figures to reach from the Mountains to the City, those who are nearest the Mountain may, after Ashokan has passed them, dance to the other end of the line and thus continually extend it until the City is reached.

# CHAPTER V

## THE OFFICIAL DINNER

### The Committee and Arrangements

The official dinner in the grand ball-room of the Waldorf-Astoria on Friday evening, October 12, was a brilliant affair. The dinner committee was composed of the following gentlemen:

Hon. ELBERT H. GARY, Chairman

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| Hon. Robert Adamson | Hon. George McAneny |
| George W. Burleigh | Herbert B. Swope |
| William C. Demorest | George T. Wilson |
| Samuel W. Fairchild | Hon. Arthur Williams |

The invitation read as follows:

{Seal of the City}

The Mayor's
Catskill Aqueduct Celebration Committee
requests the pleasure of your company
at the official dinner
to be given in celebration of the completion of the
Catskill Aqueduct
and in honor of its builders
on the evening of Friday, the twelfth of October
One thousand, nine hundred and seventeen
at seven o'clock
at the Waldorf-Astoria

GEORGE MCANENY
Chairman of the Mayor's Committee

ARTHUR WILLIAMS
Chairman of the Executive Committee

ELBERT H. GARY
Chairman of the Dinner Committee

Please address reply to
EDWARD HAGAMAN HALL, Secretary
Tribune Building, New York.

The decorations of the banquet hall were simple and consisted chiefly of national, State and City flags. Unique features were

a full-sized model of a section of the aqueduct at the rear of the speakers' platform; and a miniature working model of the Ashokan aeration basin in the middle of the hall. The latter was ingeniously constructed so as to throw up innumerable small jets of water which were illuminated by electric lights, producing a beautiful effect.

About 800 guests sat at the tables, there being a very large representation of the engineering profession. At the speakers' table were Hon. Elbert H. Gary, Chairman of the Dinner Committee, presiding; Mayor Mitchel; Mr. McAneny, Chairman of the Mayor's Catskill Aqueduct Celebration Committee; Mr. Arthur Williams, Chairman of the Executive Committee of the Mayor's Committee; the three Commissioners of the Board of Water Supply, Hon. Charles Strauss, Hon. Charles N. Chadwick and Hon. John F. Galvin; the Chief Engineer of the Board of Water Supply, Mr. J. Waldo Smith; the Commissioner of Water Supply, Gas and Electricity, Hon. William Williams; the Comptroller, Hon. William A. Prendergast; the President of the Board of Aldermen, Hon. Frank L. Dowling; the five Borough Presidents, Hon. Marcus M. Marks, Hon. Lewis A. Pounds, Hon. Douglas Mathewson, Hon. Calvin D. Van Name and Hon. Maurice E. Connolly; Prof. William H. Burr, Hon. William L. Calder, Hon. A. T. Clearwater, Hon. Robert W. de Forest, Hon. Job E. Hedges, Hon. Myron T. Herrick, Hon. Herman A. Metz, Mr. William Fellowes Morgan, Hon. Henry Morgenthau, Hon. Morgan J. O'Brien, Mr. Eugene H. Outerbridge, Hon. George D. Pratt, Gen. Réne Radiquet, Mr. Charles F. Rand, Mr. Henry R. Towne, Hon. Eugene M. Travis, Hon. George W. Wickersham, Rev. Stephen S. Wise, Mr. Alfred T. White.

The *menu* was as follows:

Waldorf Melons
Westmoreland Soup with Madeira
Celery Radishes Olives
Filet of Kingfish, White Wine
Cucumber Salad
Sweetbreads, Mòntebello Style
Green Peas saute in Butter
Breast of Chicken stuffed, Deviled Sauce
Hearts of Lettuce, Long Island
Bomb of Fresh Peaches
Assorted Cakes
Coffee

As the great Croton aqueduct celebration 75 years before was characterized by the serving of only Croton water at the official dinner, so on this occasion, the *menu* included no wines, and Catskill water was served instead.

### Toast to the President of the United States

After coffee had been served, Judge Gary said:

"Ladies and Gentlemen: With the best and purest of all beverages, on this occasion coming from the Catskill Mountains, I ask you to drink to the President of the United States."

The company drank the toast standing while the orchestra played "The Star Spangled Banner."

### Address by Hon. George McAneny

Judge Gary presented as presiding officer and toast-master Hon. George McAneny, who spoke as follows:

"Judge Gary, Mr. Mayor, Members of the Commission and our other Guests, Ladies and Gentlemen of New York: We are gathered here for no mean purpose. We have come to take a part in the celebration of an event not only of high civic importance to our own beloved city, but an event that will stand long in the annals of engineering the world over as the greatest of achievements.

"We are filled with pride; as people of New York, we are filled with satisfaction that this great work has been brought to completion and that we are now to enjoy in the full its benefit. We are filled with gratitude to those who have brought it about and who have carried it forward to the successful point of to-day.

"We are reminded inevitably of those days of 1842, coincidentally just seventy-five years ago, when the Croton Water System was completed and hailed as the greatest of events of its class. Upon that occasion, the citizens united in a series of demonstrations that have become historic in the annals of the town for their enthusiasm, for their splendor, and for all that makes occasions of that sort memorable. Had it not been for the great fact that is with us all and that we all appreciate, that this is an extraordinary year, a year of forbearance and of quiet, the City of New York would have celebrated this occasion as it celebrated that.

"When we first proposed a celebration of appropriate nature, we had in mind — and this was months ago — such a week as

that which celebrated the events of the Hudson-Fulton cycle, but we readily appreciated that it would be more acceptable to the city and to its people, that while we should not let this occasion pass, we at least should compress our enthusiasm within a day or two of time and that everything should be upon a basis of the utmost simplicity, and so it has been, and yet I challenge anyone who was among the throng at the City Hall to-day to tell us that he has ever known within the town an hour of greater dignity, of greater solemnity, of greater fineness than that.

"Brought together within the City Hall, more aged than our water systems, more glorious than anything that we have, were the Mayor through whose energy and persistence this work first found its start, and the Mayor who has the satisfaction of ending it within his own administration; Mayors who have given of their best and whose leadership has meant so much to the workers; and then a so-called report read by the Chairman of the Board of Water Supply, but a report that was an eloquent address, giving to all of those who listened information that stirred their souls and that raised to higher points still that pride and satisfaction of which I so cheerfully and so confidently speak.

"We do not propose to-night to repeat what was said then. It is all in the record, the wonderful story of the work, the palpable display of the results of faithfulness and of efficiency and of warmth and enthusiasm. It is all there. To-night we do not propose to give to you in an after-dinner program the usual assortment of after-dinner oratory, but rather to treat this as a home affair, when you people, so representative as you are of the people of the city, come here to listen to the Mayor, on your behalf, present to those who have led in the work those souvenirs of our appreciation that I am sure will long be treasured by them. It is indeed a family affair, and we shall not attempt to carry you much further than to listen to the statement of our appreciation of their personal work and possibly to hear some response from them.

"I am going to call upon the Mayor, but the Mayor is obliged to put into a very few words what he has to say, not only for the reason that he is promised elsewhere a little later on, but because his voice just at the moment at least is not what it used to be. He has calmly suggested that I make a part of his speech. He has even given me his notes, but I don't propose to do that. The spirit of mercy is with me as readily as it is with him.

"The Mayor, as I have said, has had the personal satisfaction of leading this work at the City Hall through the years that belong to the period of its completion. How closely he has studied its every phase, its every detail, I well know, because it was my good fortune to work beside him for several happy years. He, how-

ever, brings to you not only an account of his own stewardship in this matter, but he will, as I have suggested, speak for the people of the city when he speaks to the others here."

### Presentation of Medal to the Mayor

Mr. McAneny continued:

"When it was determined that appropriate celebration should be arranged, a committee of citizens, brought together largely at the instance of our good friend, Henry Towne, waited on the Mayor and asked that he, in their name, appoint a larger body of citizens — I think all told a thousand. That he did. That committee organized. It honored me with the office of chairman and it set to work upon its business. The pleasantest bit of business that that committee has to perform is, through me, to present to the Mayor that medal which I trust he will always treasure as the outward indication of our appreciation of his part in this great work; might I not add with the approval of all, of our appreciation of himself?

"This medal has been handed to me by the Chairman of our Committee on the Arrangement of the Medal, Mr. de Forest, who incidentally is Chairman of the Art Commission and is well qualified for the post that he has held. It is my privilege in turn to hand it to the Mayor and, as has been reported to you in the program, the Mayor will then take my place and hand to the others those medals that are to go to them.

"Mr. Mayor, I do indeed congratulate you upon your part in all of this, upon your personal satisfaction. I cannot tell you with what warmth and depth of feeling I congratulate you upon the place that you hold in the hearts of the people of New York."

### Address by Mayor Mitchel

Mayor Mitchel replied as follows:

"Mr. Toastmaster and Ladies and Gentlemen: To the Committee, I offer my most sincere thanks for the gift of this medal, which I shall treasure not alone because it commemorates the completion of this greatest of public works undertaken by the City of New York, but also because of those from whom it comes.

"It is a very great satisfaction to take part to-night in this commemoration of the successful completion of this wonderful public work, a public work which has covered a period of ten years, which was planned for years before it was begun, and which in its conception, in its planning, and in its execution, has been absolutely free of the suspicion of any dishonest act or of any

charge of scandal whatsoever; an undertaking also which in the magnificence of its conception and in the capacity and efficiency of execution equals, if it does not outrival, any engineering work which has been known up to this time anywhere in the world.

"This undertaking was conceived many years before it was begun, but the real initiation, the impetus that was given to the plan, came in the administration of Mayor McClellan, and it was his work, his untiring energy, his devotion to the satisfaction of this enormous need of the people of the city, that made possible the Ashokan system of water-works that we have to-night.

"No one who has not visited the Ashokan Reservoir or who has not seen the construction work under way, can conceive of this project. There was a great valley in the Catskill Mountains, woodland, meadows, farms, and seven populous villages. That valley has been turned into a great lake, twelve miles long and in some places two miles or more in width; the gorge of the Esopus Creek stopped by a vast masonry dam, and the lowlands flanking it covered by vast earth dikes, running for four miles and at one point 120 feet in height, the greatest combination of earth and masonry dam to be found anywhere in the whole world; from that leading down to the City of New York, an aqueduct 120 miles in length, that finds its way by inverted siphons across the Walkill and the Rondout Valleys and under the Hudson River; under the Hudson River in a rock tube 1,200 feet beneath the river-bed, plunging down in Storm King Mountain and mounting in the Breakneck on the other side, and from that point it passes at flow level through its tubes and tunnels and its aqueduct to the receiving reservoir at Kensico, where still another vast dam has flooded back the water over what before was farm and woodland, making still another great lake for the supply of New York City.

"Then the aqueduct passes to the next reservoir at Hill View, and from Hill View, down into a tube out through the solid rock in the back-bone of Manhattan, almost the entire length of this island and then beneath the East River into Brooklyn, and finally across Brooklyn and under the Narrows by steel pipes to Staten Island.

"It required genius to conceive this work. It required extraordinary skill to carry it out. It required business capacity and executive direction to guide the work during these ten years.

"To the members of the Board of Water Supply, the executives, is due the appreciation of the people of the City of New York for the great work that they have brought to a successful conclusion; to the unrivaled engineering genius and extraordinary capacity, coupled with an exceptional personal character, of the Chief Engineer, Waldo Smith, are due, ladies and

gentlemen, the thanks of all New York for conceiving, planning, and carrying out this greatest of all engineering accomplishments, which in the magnitude of the expenditure involved and the handling of materials, approaches the Panama Canal, and in the difficulty of the problems solved, exceeds even that great engineering undertaking.

"Neither the Board nor the Chief Engineer would have been able to bring this work to its successful issue had they not succeeded in gathering under the jurisdiction of the Board of Water Supply a group of men the like of which has not been found in any department of the city or, as far as I know, in any department of government anywhere in the country. I speak of the engineering staff, a staff of exceptional capacity, of unswerving loyalty and inspired by the ideal of contributing to the city the greatest of its public works.

"And, ladies and gentlemen, we have, too, to acknowledge with appreciation the splendid work that has been done with such fidelity and honesty and devotion, yes, to public service, by the contractors who have been engaged by the Board of Water Supply to carry out this great undertaking, and with them, to the thousands on thousands of men who have labored on the banks and in the tunnels and upon the aqueduct, laboring to bring this project to its successful conclusion."

### Presentation of Medals by Mayor Mitchel

Mayor Mitchel continued:

"Now it is my duty to award these medals to those upon whom they are conferred by the Committee. I said that had it not been for the initiative of Mayor McClellan, this project would not only never have been brought to a successful conclusion within this period of time, but it might not yet even have been undertaken. He devoted himself to securing the legislation that made it possible; he devoted himself to the organization of the Board and of its staff, voluntarily pledging himself to lift this whole matter out of the field of partisan politics by accepting for appointment to the Commission nominees at the hands of the responsible civic bodies of the city. Mayor McClellan will be known in the future as in a very real sense the father of this great new system of water supply for the city and it will staand as a permanent monument to his administration. Major McClellan is not here in person to-night and therefore it will be necessary for me to hand him this medal at another time, but there is none conferred that will be more richly deserved than this one which goes to ex-Mayor McClellan.

"Of course, the direction of this whole enterprise fell to the members of the Board of Water Supply. It was their duty to select the Chief Engineer; it was their duty to support him in the selection of his technical staff; it has been their duty to administer the affairs of the Board from the time of its organization to this, and as the responsible head and executive of this entire project, it is fitting that the city should confer upon the members of the Board and upon those who have been members of the Board — and in the one case where a member of the Board has unfortunately passed away, to the members of his family — medals to commemorate their services to the city in this great matter.

"Therefore, ladies and gentlemen, it is my very pleasant duty to confer these medals, first, upon Mr. Charles Strauss, the President of the Board; upon Mr. Charles Noyes Chadwick, member of the Board of Water Supply from its organization; upon Mr. John F. Galvin, member of the Board of Water Supply; upon Mr. John A. Bensel, former member of the Board of Water Supply, who unfortunately is not present this evening; and upon Mr. Charles A. Shaw, former member of the Board, and also to present one to the members of the family of Mr. J. Edward Simmons.

"From the very inception of this great project it has been my good fortune to be able to follow its development and execution. I have seen the dams rise from the level fields; I have seen the aqueduct in each stage of its construction; I have been taken by the Chief Engineer down into those inverted syphons under the river and under the valleys, and I know from my own observation what a monumental undertaking the engineering of this great project has been and the untiring devotion that was brought to it by the Chief Engineer, Mr. J. Waldo Smith. It is with peculiar satisfaction that I present to the Chief Engineer this medal on behalf of the Committee.

"The next and last of these commemorative medals is presented to all those who through their genius, their vigor and their labor, have contributed to this vast undertaking; to the engineers, to the staff, and to the countless thousands of laborers who have toiled in all stages of the work, and for the time being, until a fitting resting-place has been selected for this medal, it is committed to the keeping of the Chief Engineer of the Board."*

* For a description of the medal see chapter XI, in which the final depository of the last-mentioned medal is stated. See also plate 23.

### Remarks by Hon. George McAneny

The toastmaster then said:

"The Board of Water Supply wishes opportunity to respond to what has been said to them in the course of these presentations, but before I call upon them or their representatives, may I again remind you of the magnitude of the work that each of them has been called upon to do and may I offer you this rather striking bit of physical reminder of what they have had to do?

"If you will gauge every link in this great chain of work by the appearance of this cross-section,* in actual measurement, of the aqueduct under which we have been placed to deliver to you our messages, you will get some idea of the vastness of everything that is within its scope.

"In the center of the room we have had playing during the evening a miniature reproduction of the aeration plant at Ashokan, drawn according to scale, I am told, not literally supplied with 1,600 jets as that lake is, but nevertheless illustrating to you the minute care that has been taken at every stage when even the air is called into play to add an extra touch of purity to the water before it enters the aqueduct and comes to us.

"It took just three days for the water that has been spraying there to reach the Waldorf-Astoria, and that is its scheduled time from Ashokan Dam.

"I have had an abundance of occasion to touch the members of the Commission in their work. I know that it has not only been a matter of board action, of consideration of problems of finance, of engineering, of detail of every description that comes within the purview of a body of men acting together, but I know that each of the individual members has worked in his independent functions, each has worked untiringly and without fatigue to bring this result to us to-night; and the Chief Engineer — whenever Waldo Smith is mentioned, there are interruptions that embarrass the progress of the meeting. It has been suggested by gentlemen at my left that for convenience, at least, of the passing day, we might rechristen this not Columbus Day, but Waldo Smith Day.

"I will tell you in confidence that a great deal of his success is due to the fact that he took the traditional advice of beginning young. It is related of him, in fact it is a matter of history, that Waldo Smith was seventeen when he became the chief engi-

* Pointing to the full-sized cross-section of the aqueduct above the speakers' platform.

neer of something. He was chief engineer of the water-works of his home town in Massachusetts, and when I pressed him to-day for comparative figures, he admitted that that water system carried 50,000 gallons a day. If the scale of growth from 50,000 a day to 500,000,000 measures in any degree the growth of reputation of Waldo Smith, I will leave it to you to judge as to whether figures can possibly lie.

"So we are to hear one on behalf of these men who have done the work and of the great body of men associated with them, and it is my pleasure to call upon the Chairman of the Board, Mr. Strauss, for a word in his own and in their behalf."

### Remarks by Hon. Charles Strauss

Mr. Strauss spoke as follows:

"Mr. Toastmaster, Ladies and Gentlemen: This morning at the City Hall I had the honor of presenting to the Mayor, before citizens who crowded the aldermanic chamber, the report of the Board of Water Supply on the completion of this work.

"Our Commission is triple-headed, as you have already been informed. I am the junior member of the Board, having joined it in February, 1911. I came very nearly being a twin of Commissioner Galvin, who preceded me by only a few weeks. When he and I took our seats in that Board, we found there a handsome man, our predecessor, who had by dint of experience, long and patient labors in this cause, earned the title of 'Nestor of the Board.' He began dreaming of this water supply away back twenty years ago, ten years before the law was passed under which the Board of Water Supply was organized and nearly fifteen years before either of his junior colleagues were appointed to the Board.

"Now, having represented the Board this morning in the formal proceedings, in which I addressed His Honor on the important subject of the completion of the work and rendered an account of our stewardship, it is Mr. Galvin's opinion, in which I very heartily concur, that nothing could be more apt than that Commissioner Chadwick, of whom I have spoken anonymously until now — the man who has spent night and day in the preliminary work of organizing the legislation and the material upon which subsequently was founded the solid structure upon which the Board exists — should be given this opportunity of representing the Commissioners of the Board and expressing his and our thanks for the honor which has been done to us.

"Mr. Toastmaster, with your permission, therefore, if I may, I should like to call upon Commissioner Chadwick to represent us on this occasion."

### Remarks by Hon. Charles N. Chadwick

Mr. Chadwick spoke as follows:

"Brother Strauss, Mr. Toastmaster, Ladies and Gentlemen: I appreciate the courtesy and friendliness expressed by my associates on the Board of Water Supply.

"It is true that I have labored, as others have labored, for this work. I wish, if I may in the very few minutes that I have to speak to you, to impress upon you two thoughts which go toward the solution of this problem of bringing water into the City of New York.

"From the very beginning there has been in the minds of all who have been connected with this work the desire to give of the best that was in them to the highest work possible for them to do in bringing pure and wholesome water from the Catskill Mountains to the City of New York. Also we could not have done this work if we had not taken into consideration the human side of the proposition. Great as has been the engineering, great as has been the administrative work and the solution of the various problems of law and legislation and business administration that have come to us, none of these has been greater, in my mind, than the fact that the Board, the Chief Engineer and all connected with it, have realized that in order to do a work of this kind, the fact that there were *men* at work must be recognized.

"This we have had in mind in the specific clauses in the contracts and specifications providing for the comfort and convenience of the workingmen and their families, and in the camp schools organized to teach the men the English language, in order that they might know the laws and institutions of the country, and in the interests of good citizenship.

"I cannot express adequately my own feelings and the feelings, I know, of my associates and of the Chief Engineer, and of all who have been connected with the work as to the great value to us of the appreciation of our work as expressed in the celebration that has been going on to-day. The medals that have been given to us mean a great deal. They symbolize our desire and effort to do our best in what has been given us to do, and as such they will be cherished.

"But, ladies and gentlemen, there is this thing to be said: We could not have done this work if it had not been understood and taken up and supported by the great civic bodies of New York. In the very inception of the work they came to the front. All through the times of stress and trouble, no matter what the vicissitudes were, they were behind us; and now, in commemoration of the work and in endorsement of it, this great body of people

appointed by the Mayor from the civic bodies has prepared this day of celebration, the record of which will go down into the future, and for which we who have worked thank you."

### Address by Mr. J. Waldo Smith

Mr. McAneny then invited Mr. J. Waldo Smith, Chief Engineer of the Catskill aqueduct, to say a word on his own behalf, and Mr. Smith spoke as follows:

"Mr. Toastmaster, Ladies and Gentlemen of New York: I am quite overcome with emotion from all that has gone on to-day, and I beg you to believe me, I am truly grateful of the great tributes that have been paid in the speeches at the City Hall by the Mayor and by the Toastmaster this evening.

"It would be the height of egotism, however, for me to assume for one moment that this was personal and not intended for others more deserving. At best, I am but the instrument selected by chance to pass on this tribute to those who richly deserve it.

"The medal which has been presented has the inscription: 'To all who have contributed to the spirit which controlled the work, to their vision, character and genius.' This is just as it should be, for all have contributed in a material amount. The administration, the engineers, the contractors, the laborers, all can claim an interest in this medal. They have all worked together and we have all believed in each other, and the first consideration of all has been the good of the work, and it is a high honor and a great privilege to stand here to-night and express for all these their great and deep appreciation of this splendid tribute which has been paid to their services.

"I am sorry the Mayor has gone away, but it seems fitting on this occasion that I should express my thanks to the Commissioners of the Board of Water Supply for leaving my hands free, never tying them; I was called for and selected and in no case has a recommendation for appointment been influenced in any manner by one of the Board.

"I thank them all and the Mayor for their interest and cordial support on all occasions; and Controller Prendergast, who has done so much, who has won the praise and the good-will of all the contractors by changing the rules in his office so that now they get their pay promptly.

"I wish also to thank all the members of the Board of Estimate, who have always been willing to grant the favor of a hearing. I don't know what more man can ask than the privilege of a favorable hearing.

" I want particularly to thank Mayor Mitchel. He isn't here, but I am going to do it just the same. You know, about ten years ago he conducted an investigation into the iniquities of the Ashokan Dam contract and we thought at that time it wasn't an investigation, it was an inquisition, a crucifixion, but time mellows all things and we know now that that was the most thorough and most effective lesson in preparedness that could possibly have been given. It consolidated and bound this force together with bands that were strong but flexible. It taught us how to fight and ever since then whenever there was a cloud on the horizon, every member of the organization was right there ready to fight on the defensive or on the offensive.

" And for the last four years Mayor Mitchel and his associates in the Board of Estimate have been giving this city just the same sort of preparedness so that they would be ready to meet this great crisis which now confronts the country, and we feel that it is a pity that this nation didn't have the same sort of preparedness during those years, so we could more quickly come to the front and do the great work which we have started to do.

" I would be failing in my duty here to-night if I did not crave your indulgence for a minute longer. There have been a great many words said to-day about the loyalty of all the men connected with the Board of Water Supply. That means the laborer, it means the contractor — and I want to say that no one has been more loyal, more disinterested, more conscientious, nor contributed more to the success of the work than the contractors, and I see that many of them are here this evening.

" But the loyalty that has been spoken of is not the kind that is bounded by the limits of the work, for when the call came and this government was facing the crisis, these men have been the first to respond and they have left their families and their homes, they have gone cheerfully and of their own volition, to take up whatever work was assigned to them. Many of them are now in France and many more are going.

" That great Premier of England has recently said: ' Europe is drenched in the blood of her bravest and her best,' and he said further, ' Let us not overlook the series of hallowed dead. They are like the stations of the cross on the road to the emancipation of mankind.'

" Those men are on that road and they are doing all they can to help those much beleagured nations and they are seeing, so far as in them lies the power, that this nation is not going to fail in the great task that it has undertaken to complete the emancipation of all mankind"

### Remarks by Hon. George McAneny

The toastmaster said:

"Now I am going to ask Mr. Towne to pronounce a sort of benediction upon the spoken part of the evening. Much has been said during the day of the earlier stages of the history of the development of this movement. It really proceeded through the administrations of several mayors. The great work of research, of investigation, of possibilities, the preparatory work was done in the main during the administration of Mr. Low, and chiefly at the hands of that commission of engineers appointed by him: Professor Burr, who is with us to-night; Mr. Freeman and Mr. Hering.

"When this groundwork had been covered and the available opportunities had been presented, there came the question of decision as to what should be done, and it was there that Mayor McClellan's great opportunity came and you have heard of the way in which he used that opportunity. To his splendid position then, to the vital interest that he took in everything that occurred in the passage of the enabling legislation, in the actual selection of the Catskill shed, in the appointment of commissioners who were well qualified and who in turn appointed those who were well qualified; to Mayor McClellan and to those who were associated with him at that time, and chief among those may I mention our good friend Herman Metz, who is also with us to-night; and then came those years of the prosecution of the work through the administrations of Mayor Gaynor and Mayor Mitchel, which are now doubly familiar to you since you have so recently heard their story — to all of these credit is due.

"Through all of that time, the work received its chief encouragement from those civic bodies from the outside. Just as Mr. Chadwick's Brooklyn body had taken this matter up years ago, they joined them and did their share of investigation and promotion and support for those who had to do the work within.

"Through all that time perhaps the Merchants' Association was the liveliest of all the bodies so engaged, and within the Merchants' Association, first its President of that day, William F. King, then its President Henry Towne. But before Henry Towne was the President, Henry Towne in person was a splendid moving force in bringing all of this thing to pass. He is the twin father of the aqueduct and the system, if such a thing may be.

"Mr. Towne not only worked hard to convert the city and to bring these things to pass, but, as I have said, it was due to his inspiration that the plan for this celebration itself was brought about, and we are doubly grateful to him, therefore, doubly

content to receive from him that word of benediction that I have mentioned."

### Address by Mr. Henry R. Towne

Mr. Towne spoke as follows:

"Mr. Toastmaster, Gentlemen of the Commission, Ladies and Gentlemen: Mr. McAneny has laid on me a task somewhat beyond my ability or experience in regard to a benediction, but after listening to all that has been said during the exercises of to-day in regard to this great undertaking which has now reached its consummation, there occurred to me a few items of interest which have not been touched upon by others and which in a somewhat disjointed manner, perhaps, I will venture to refer to.

"In the life of a great community like this, as in that of the individual, events which at the time seem to be misfortunes or threaten disasters, turn out in their results to be blessings, and so it was at a critical stage of this undertaking. After Mr. Chadwick and his associates had dreamed their dream and had preached the need of added water supply and yet no public interest had been aroused, a band of conspirators, as they were deemed at that time and as some of them certainly were, conceived the project of corralling the water supply of this great city, of barring the city from the further prosecution of its duties in that direction, and of making a contract to run for a great term of years under which the city, as it was estimated at the time, would have paid out one hundred millions of dollars and had nothing left for it to show except the water it had consumed.

"It was at that time that Mr. William F. King, to whom the Toastmaster has just referred, one of New York's splendid citizens of that day, perceiving as no other at the moment perceived the menace to this great community, started to attack and, if possible, to defeat the proposed iniquity. In doing that he called together under the auspices of the Merchants' Association, of which he was the founder and President, a citizens' committee of some eighty prominent citizens.

"One of its sub-committees, its chief and largest sub-committee, was that on engineering, and it was in that connection that I first came into the work, first became interested in this subject, and was led to form what became my permanent connection with the Merchants' Association; and among the names which should always be held in honor in connection with this whole great project, that of William F. King should stand high on the list.

"The papers told us a few days ago of the visit of certain Indians to this city under the guidance of some of our government officials, and one of the army officers, at the close of this

day during which the Indians had been shown the wonders of New York, asked the chief what had impressed him most in all that he had seen, and, without speaking, as he happened to be standing where he could do it by sign, he pointed to a water-pipe. Nothing had impressed the mind of that untutored savage in all the vast achievements of science and industry which he had seen in this great city so much as the fact that water, the vital need of human life, was on tap at every point throughout this great city.

"That is symbolic of the event which we are celebrating to-day. Water — it is a trite saying, but it is none the less true — is the vital fluid of every human society, every great gathering of human beings. It has become so our habit to have it, to use it freely, that we are apt to forget what it has cost to bring it to our doors, and the celebration of to-day should bring that fact home to all of us and should help in many ways to stimulate the spirit of citizenship among our people.

"The bringing of the Catskill water to New York is the greatest civic achievement of a physical kind certainly in the history of this country, and probably in the history of the world. Other speakers have told you that the engineering difficulties overcome in the construction of the aqueduct equalled at least those of the construction of the Panama Canal. I have it from General Goethals that while in magnitude of quantities handled or in the dollars spent, the Panama Canal was the greater of the two, as an engineering feat, in the vastness and complexity and number of the engineering problems to be solved, the Catskill Aqueduct was very much the greater of the two achievements.

"New York, therefore, has done the greatest single thing in the engineering of any community so far in the history of the world. All of us can be proud of the fact and all of us should render homage and praise and thanks to those who have brought it about; to the men of vision who foresaw the need; to the men of action who planned the methods, the organization; to the engineers who designed and constructed the work; to our City government during the three honest administrations during which the work has been conducted and completed, the character of which we hope is to be continued after this administration; and, indeed, to all who in any way took part in the planning and achievement of this great undertaking, we owe our thanks, and especially to those who, during these recent years of war, have brought this great factor of peace to a successful consummation."

### Acknowledgments and Announcements by the Toastmaster

Mr. McAneny said:

"Ladies and gentlemen, the speaking part of our program is ended. Before we pass to this illustration of what it all means in practice, using the modern and familiar method of the moving picture, may I, as the chairman of the committee, and, I am sure, in your behalf, express a word of my own appreciation and yours of the work of men who have arranged this festival, who really have done the work?

"In particular do I have in mind the Chairman of the Executive Committee. I have protested now and then that the only thing of value that I have been able to do as chairman of the broader committee, and that a thing of singular value, was to induce Mr. Arthur Williams to take the actual working chairmanship. To his industry and that of Dr. Edward Hagaman Hall, the secretary, and to the chairman of the several sub-committees; Dr. Oswald G. Villard, who has done such wonders with the plan for the music, and Dr. George F. Kunz, who has brought every museum and learned society in the town to our service; Mr. Leo Arnstein, who has helped with the public schools — perhaps it is a bit hazardous to attempt a list of them, as I should surely pass some one of consequence — the work of all these has freely been given and it is to these gentlemen that we owe the success of to-day in every stage of the unfolding of this celebration.

"I am asked to announce that the music festivals that had been planned for this evening in the main out-of-doors, having been prevented by the rain that has come to us, will be held to-morrow evening, each in the place that has been advertised, with the same program, with the same beauty of incidental effect that the committee in charge of that work has promised.

"May I also say that out of this day or two of spoken celebration, there will come, we trust, a permanent memorial of the bringing down of the Catskill waters, and that it is within the plan of the city and of the citizens who are represented here to propose that the lower aqueduct of the Croton system, opened seventy-five years ago and now obsolete, holding a strategic position within the beauty of Central Park, shall be removed and that some appropriate use shall be made of that spot, within which there shall stand a permanent and appropriate memorial to be erected by the citizens of New York.

"These acres of restored park-land — or of land, for that matter, I shall not say restored, but for the first time given to the park, for when the reservoir was built the park was not there

— these acres shall be used for the public recreation of the people in the ways that the committee and the city government and all concerned shall best devise. Some have been discussed, but all plans that have to do with the proposed use and with the detail of the memorial unquestionably will be considered by those in authority.

"May I also state, at the suggestion of the Chairman of the Executive Committee, that there is a sort of Class B Medal, to be given in addition to those that have been mentioned this evening, and that the recipients of those medals will be Mr. Towne, of whose right and title to such a medal I have already spoken; the Controller, Mr. Prendergast, and the other members of the Board of Estimate and Apportionment, in which the Chairman permits me to include myself, I see, in retrospect; Mr. de Forest; and a few others whose services, in the judgment of the committee, merit such recognition.

"The moving pictures of the work and its progress and the actual flow of the waters of the Catskill system will now be shown upon a screen that will occupy the center of the section that hangs above us. The showing of the pictures will not take more than twenty minutes of time and it is a spectacle well worth seeing. We hope that all of you, if possible, certainly most of you, will remain to see them. When they are finished the evening is closed.

"I will now turn over the gavel, as it were, to the gentleman in the balcony."

### Exhibition of Moving Pictures

The moving pictures, which had been shown at the City Hall earlier in the day (see page 839), were then projected on the screen.

# CHAPTER VI

## MUSIC FESTIVALS

### All Nationalities United in Participation

The five music festivals, held in the five boroughs of the City on Friday, October 12, Saturday, October 13, and Monday, October 15, 1917, were one of the major features of the celebration. They had particular values, not only as employing the pleasing art of music as a medium of expression of joy, but also because they carried the celebration into all the five boroughs which were equally concerned in the building of the aqueduct; afforded opportunities for large popular enjoyment; and,— what was perhaps still more significant,— permitted the active participation of the German singing societies and other musical organizations so that all nationalties of citizens might feel their common interest in an event of common civic concern. The participation of the German societies was upon invitation by the Mayor to the United German Singing Societies at the suggestion of the Chairman of the Music Festivals Committee. In response to this invitation, the societies, on Friday, September 28, voted unanimously to cooperate. As American citizens, they considered themselves to be American singers and expressed the wish to sing their folk-songs in English. They felt, at the same time, that they could most fittingly emphasize their patriotism and loyalty by appearing at this festival celebration under their own name of the United German Singers of New York. It was in that spirit in which the Mayor's Committee was very glad to avail itself of their generous cooperation.

The Music Festivals Committee was composed of the following ladies and gentlemen:

Oswald Garrison Villard, LL.D., Litt. D., Chairman
George Frederick Kunz, Sc. D., Ph. D., Vice-Chairman
Felix F. Leifels, Secretary

| | |
|---|---|
| Miss Caroline Beebe | Leo Kohns |
| Walter J. Damrosch, Mus. D. | Thomas L. Leeming |
| A. L. Doremus | Mrs. Charles C. Nott |
| Albert Hallgarten | Allan Robinson |
| Franz Kneisel | Mrs. J. Gamble Rogers |

Walter T. Rosen

The Mayor's Committee was particularly fortunate in having at the head of the Music Festivals Committee Dr. Villard, President of the Philharmonic Society of New York, whose culture and musical acquaintance and resources enabled him to organize and carry out these festivals on a very high plane.

It was originally intended to hold all five festivals on Friday, but the heavy rain-fall which began in the latter part of the afternoon necessitated the postponement of four of them.

### Music Festival in Queens Borough

The music festival in Queens Borough was held on Friday afternoon, October 12, 1917, in Court-House Square. It consisted of community singing under the direction of Mr. Harry Barnhart, conductor, with Miss Marguerite Hazzard as soprano and Mr. Frederic Watson as pianist, and orchestral music, interspersed with addresses. The program was as follows:

America ..... Carey
Festival March, "Hail America" ..... Drumm
Address by President of the Chamber of Commerce, George J. Ryan.
Ballet Suite, "Egyptian" ..... Lugini
Walkure (a) Wotan's Farewell
(b) Magic Fire Scene ..... Wagner
(a) Good-Bye ..... Tosti
(b) Somewhere a Voice is Calling ..... Tate
Miss Marguerite Hazzard
Community Singing.
Band and Audience
Address by Commissioner of the Department of Parks, John E. Weier.
Cornet Solo, "Soldier's Dream" ..... Rogers
Mr. Vincent Buono
Hymns of the People
Star Spangled Banner

The idea of the community singing, above referred to, is explained in a paragraph on the program referring to the New York Community Chorus of which Mr. Barnhart is Director. It says:

"The Community Chorus movement which is spreading so rapidly through the country provides for the free regular meeting of the people of our cities, irrespective of previous musical knowledge or training, in public halls and parks, to sing together for the joy of singing and for what song can do to awaken and foster

the spirit of brotherhood. Because this movement has been an inspiration to the singing of the soldiers and sailors, the Army and Navy Departments have provided for its development in the training camps. At the request of Major General J. Franklin Bell, Commanding, the New York Community Chorus, under the leadership of Mr. Harry Barnhart, will take charge of singing at Camp Upton, Yaphank, Long Island. You are invited to join the Chorus and do your part in this important work. Address, Secretary, 130 East 22nd Street, New York."

### Music Festival in Manhattan Borough

The music festival in Manhattan Borough was held on the Mall in Central Park on Saturday evening, October 13, 1917. Mr. Victor Herbert had generously cooperated in arranging this festival and expected to conduct the concert, but he caught a cold in the rain on Friday and on Saturday was confined to his bed. His place was taken by Mr. William Humiston, assistant conductor of the Philharmonic Society. The music was rendered by members of the People's Choral Union, Mr. Edward G. Marquand, conductor; the Liederkranz Society of New York, Mr. Eugen Klee, conductor; the United Singers of New York, Mr. Paul Engelskirchen, conductor; Miss Helen Stanley, soprano; and a military band of ninety players. The program was as follows:

1. Louisiana Festival March.....Van der Stucken
2. "Thanks be to God," from the oratorio "Elijah".....Mendelssohn
   The People's Choral Union and The Liederkranz Society of New York.
3. Larghetto from the "New World" Symphony, "Hiawatha's Love Song".....Dvorak
4. Aria of "Micaela," from the Opera, "Carmen".....Bizet
   Miss Helen Stanley
5. Fantasy from the Opera, "Eileen".....Herbert
6. The United Singers of New York (Male Chorus)
   "Soldier's Farewell"—"Old Black Joe"—"My Old Kentucky Home"
7. Kamenoi Ostrow.....Rubenstein
8. American Fantasy, "The Star Spangled Banner".....Herbert
   The People's Choral Union, The Liederkranz Society, The United Singers of New York, and Miss Helen Stanley

### Music Festival in Brooklyn Borough

The music festival in Brooklyn was held at the Soldiers and Sailors' arch in the Plaza at the entrance to Prospect Park on Saturday evening, October 13, 1917. It took the form of a

"song rally"— that is to say, popular songs sung by the people — led by the Brooklyn Community Chorus of which Mr. Charles S. Yerbury is director, assisted by delegations from various musical societies and by the Naval Reserve Band, Mr. Thomas F. Shannon, Leader. The program was as follows:

Overture, Rienzi ..... Wagner
Songs, "Battle Cry of Freedom" ..... Root
"Old Folks at Home" ..... Foster
"Columbia, the Gem of the Ocean" ..... Shaw
Excerpts from Faust ..... Gounod
Songs, "Battle Hymn of the Republic" ..... Steffe
"My Old Kentucky Home" ..... Foster
"Tramp, Tramp, Tramp" ..... Root
American Melodies ..... Foster
Songs the Soldiers Sing:
"Keep the Home Fires Burning" ..... Novello
"Over There" ..... Cohan
"Smile, Smile, Smile ..... Powell
Overture, 'William Tell" ..... Rossini
Gems from Carmen ..... Bizet
Songs, "Motherland" ..... Woodman
"Dixie" ..... Emmet
"America" (new air) ..... McCabe
March, "Stars and Stripes Forever" ..... Sousa

### Music Festival in Bronx Borough

The music festival in the Borough of The Bronx was held in Crotona Park, at 177th street and Third avenue, on Saturday evening, October 13, 1917. This concert was rendered with the cooperation of the United Singers of the Bronx, Mr. Emil O. Lender, conductor, a military band of fifty players, Mr. Frank Martin, conductor, and Miss Julia Claussen, mezzo soprano. The program was as follows:

1. "My Country, 'Tis of Thee"
2. Overture, "Il Guarany" ..... Gomez
3. Aria, "Ah mon fils," "Le Prophete" ..... Meyerbeer
Miss Julia Claussen
4. United Singers of the Bronx ..... Folk Songs
5. Tone Poem, "Finlandia" ..... Sibelius
6. March, "The Stars and Stripes Forever" ..... Sousa
7. Selection, "Cavalleria Rusticana" ..... Mascagni
8. Aria, "Mon Coeur," from "Samson et Delilah" ..... Saint-Saens
Miss Julia Claussen
9. American Fantasy, "The Star Spangled Banner" ..... Herbert
Miss Julia Claussen

### Music Festival in Richmond Borough

The music festival in Richmond Borough was held in Curtis Field, New Brighton, on Monday evening, October 15, 1917. Here the Mayor's Committee had the cooperation of Mme. Eva Gauthier, soprano, and a military band of fifty players under the direction of Mr. Lambert Eben, bandmaster of the 71st Regiment. The program was as follows:

"My Country, 'Tis of Thee"
Overture, "Jubilee" ..... Weber
Selection, "Her Soldier Boy" ..... Romberg
Invocation — The Reverend Pastal Harrower
Songs, "Old Black Joe" ..... Foster
"My Old Kentucky Home" ..... Foster
"Soldier's Farewell"
Band and Audience
Aria, "The Recruiting Vivandiere" ..... Godard
Mme. Gauthier
Speech — Assistant Commissioner of Works Morrison
Excerpts from "Aida" ..... Verdi
Songs, "Old Folks at Home" ..... Foster
"Columbia, The Gem of the Ocean" ..... Shaw
Band and Audience
9. American Fantasy, "The Star Spangled Banner" ..... Herbert
Benediction — Reverend Monsignor Charles A. Cassidy

# CHAPTER VII

## RELIGIOUS OBSERVANCES

### The Committee and Its Work

Saturday, October 13, and Sunday, October 14, were designated as days for religious observances by denominations accustomed to worship on those days respectively, and in many of the synagogues and churches throughout the City the completion of the aqueduct was recognized and lessons drawn from it in the preaching.

The Committee on Religious Observances of the Mayor's Committee was composed of:

WALTER LAIDLAW, Ph. D., Chairman

| | |
|---|---|
| Rev. David James Burrell, D. D. | Rev. E. D. Fitzgerald, D. D. |
| Rev. Frank Oliver Hall, D. D. | Rev. D. de Sola Pool |
| Rev. Charles E. Jefferson, D. D. | Rev. Christian F. Reisner, D. D. |
| Rev. William T. Manning, D. D. | Rev. George U. Wenner, D. D. |
| Rev. Harlan G. Mendenhall, D. D. | Rev. Cornelius Woelfkin, D. D. |

In furtherance of the work of the committee, the General Committee of the Federation of Churches had printed 1,500 copies of a 16-page pamphlet and sent them to clergymen throughout the city, "in the hope that many hundred clergy may see their way clear to dignify the celebration by treating it as one worthy of public thanksgiving to God, who 'sendest the springs into the valleys which run among the hills.'" The pamphlet contained the following "sermonic suggestions," prepared by various members of the committee:

### Suggestions by Rev. D. de Sola Pool

Interesting Biblical References to Aqueducts, 2 Kings 18:17; 20:20. 2 Chronicles 32:30. Isaiah 7:3.

Suggestive material for a sermon, adapted for use in the Synagogues of New York City on October 13, 1917, in connection with the Catskill Aqueduct Celebration.

Text.— Ho, everyone that thirsteth, come ye for water. Isa. 55:1.

The priceless blessing of water in every phase of life. The former rain and the latter rain that make life possible in the land of the Bible. The reviving miracle of the rainfall on land, on beast and on man. Prayers for rain, such as King Solomon's (1 Kings 8:35), or the public fasts and the prayers for rain in a time of drought, described in the Mishna (Taanith). Water obtained at the risk of life (2 Sam. 23:13:17). The social consequences of a lack of water shown by the rebellions in the desert. Having to be sparing in the use of water and drinking it by measure (Ezek. 4:11, 16; Lam. 5:4), a hardship bordering on calamity. Therefore, the Rabbis prohibit the waste of one man's excess of water, so long as his neighbor can make use of it (Yebamoth 12b).

Water must be pure and drinkable (Aboda Zara 30b), and one of the miracles for which the prophet Elisha was most gratefully remembered was the purifying of the water supply of the city of Jericho (2 Kings 2:19–22). Unless the city's supply of water is pure, the water fails in one of its most important applications, *i. e.,* purifying and cleansing. Throughout the Levitical law, water is regarded as the great instrument for cleansing from outward pollution and symbolically from inward sin (Ezek. 36:25).

The health and the safety of a city depend on its water supply. The Siloam inscription recalls to us an engineering undertaking in the days of Ahaz and Hezekiah to bring water to Jerusalem, in its day no less wonderful than the great Catskill Aqueduct of to-day. Little wonder that there grew up the festival of water drawing with dancing, torchlight processions, hymns and symbolic ritual acts with water. Our gratitude for the copious, pure, health-giving supply of water brought to the city.

Spiritual applications of water quenching thirst (Isa. 44:3; 55:10; 58:11. Psalm 42:2).

### Suggestions by Rev. Frank Oliver Hall, D. D.

LIVING WATER

Read as Scripture Lesson, John 4, 1st to 34th verse.

Text, John 4:10.

The important part which water plays in the life of man and the world.

Man's body is three-quarters water.

Out of this importance of water to the life of man grew the constant Biblical use of water as a symbol of life.

The incident of Jacob's well is a case in point.

1. The difference between the ancient method, when each person dug his own well for his own use, and the modern method, when we construct together a gigantic system for the supply of the greatest city the world has ever seen, indicates the development of our material civilization.

We have learned that through co-operation we can achieve vastly more than by the old-time method of competition. "Every man for himself and the devil take the hindermost" has given place to the motto, "Each for all and all for each, or the devil is likely to get us all."

Something of this kind Jesus had in mind when He preached about the Kingdom of Heaven on earth. Each was to seek first the Kingdom of God and His righteousness, confident that so, and so only, all worthy desires would be achieved. So to-day we are not each digging his own well, but co-operating under wise leadership for the common good.

2. Exactly the same rule holds as to spiritual progress.

Many are still living spiritually in the days of Jacob's well; religion is a device for achieving individual salvation.

But we are beginning to understand that a few select men are not to be saved out of the world, but that the world itself is subject to salvation. If we ever get to heaven it will be because we built it together. That means digging; wise engineering; in order that the water of life, truth, justice, sympathy, may be supplied for every thirsty soul. There is only one way to salvation and that is Christ's way. He can give us living water. His way is self-forgetful service in the spirit of love. Knowledge,

patriotism, friendship and co-operation build the reservoir. Hate poisons the water of life. Class strife.

There is no happiness in this or any other world except in knowing and doing the will of God, whose other name is Love.

"My food," said Jesus, "is to do the will of Him that sent Me and to finish His work."

### Suggestions by Rev. Harlan G. Mendenhall, D. D.

I have before me the circular of "The Southern Commercial Congress," which meets in this city, October 13–20. It suggests that a special religious service appropriate to this convention be had in our churches on October 14th, which is the Sunday for the Catskill celebration.

Text for sermon as suggested:

Acts 21:39.— But Paul said, I am a Jew of Tarsus in Cilicia, a citizen of no mean city. The glory of New York as seen in her churches, schools, museums, parks, places of care for the poor and suffering, philanthropies, etc., as over against the folly and sin of the city; which is so much and so often in the public press and the minds of the people.

### Suggestions by Rev. Christian F. Reisner, D. D.

"THE POWER AND POSSIBILITY OF CO-OPERATION."

Revelation 21:2.

INTRODUCTION. In the old days of separate tribes war was constant over all the earth. If Europe spoke one language in all likelihood there would to-day be no war. Some one has said that if even telephones were as common in Europe as in America war would have been impossible. When there is a common aim and task national prejudices disappear. France and England, once so pitilessly pitted against each other, are commonly merged to-day. In New York City we speak sixty-six languages and have perfect harmony. Earth needs a common object to strive for and then the beauty and the strength of harmony will appear. This will be the "holy city," of John's vision. Phillips Brooks says: "The Bible starts with a lonely garden, but ends with the ideal harmony and co-operation of the city."

I. *The power of co-operation.* The city demonstrates the power of co-operation in the completion of this aqueduct costing $163,000,000, more than the Panama Canal. Similar achievements in the city are alone the product of co-operation. The great bridges, the park systems, the subways, etc. The great aggregation of capital made possible because people living close together and seeing each other get confidence and by the hundreds pool their issues. So they buy the bonds which made the aqueduct possible.

It is easy to reach such close living bodies with a quick and a strong appeal as illustrated in preparedness parade, in the sale of Liberty Bonds and raising of Red Cross funds. When there is real co-operation the advance activities are almost irresistible. Behold even the power of the Germans with their efficiency organization, think what power it might have if guided by higher ideals. The Brooklyn bridge is made up of separate wires. The great aqueduct is the combined result of many brains and many dollars.

II. *Its Possibility.* People will rally together where it is evident that common service is to be rendered. There has been no opposition to the tremendous expenditure and task of building the aqueduct. In a few months we " recruited " over one million soldiers and sailors for war. Now we are drafting, without difficulty and almost without protest, 800,000 more, and that, too, when everyone risks his life. This is possible because men believe the war is fought for humanity's uplift. At heart people are brotherly, there is an innate kinship that responds to stirring and worthful appeals. There are other worthy objects to arouse us. We must find them and hold them up until people see and respond. No man can work alone. Such stupendous pieces of rare and useful service would be impossible without co-operation. We must find the way to arouse interest in other great movements. Such things as health, playgrounds, school methods, good citizenship, etc. The lower Central Park reservoir, which is to be emptied because of the new system, should be partially, at least, used for playgrounds.

We must be hopeful as we advocate movements worthy of co-operation for one such success as the aqueduct promises more and better ones.

### Suggestions by Walter Laidlaw, Ph. D.

Dr. Laidlaw, taking as his text the first verse of the 121st Psalm, "I will lift up mine eyes unto the hills whence cometh my help," devoted ten and a half pages of the pamphlet to extracts from the monograph entitled "The Catskill Aqueduct and Earlier Water Supplies of the City of New York," published by the Mayor's Committee, ingeniously grouped under the following five suggestive headings:

1. The high level of the reservoir the love of God, who knoweth our frame, and remembereth that we are dust.

2. The hills around the Ashokan Dam were hoisted by God's power and purpose.

3. The hills of difficulty leveled by science of engineering skill.

4. The Hill of Delay Leveled by Social Conscience.

5. The Hill of Selfish Designs which was blasted away by civic devotion.

# CHAPTER VIII

## PUBLIC SCHOOL OBSERVANCES

### Publications and Competitive Essays for Medals

The lessons of the Catskill aqueduct were brought home to the children of the public schools in three different ways, namely, by pictures, by printed matter, and by competitive essays for medals.

The first of these were prepared under the direction of Hon. Arthur Williams, Chairman of the Executive Committee of the Mayor's Catskill Aqueduct Celebration Committee, with the co-operation of the photographic department of the New York Edison Company. Photographs of prominent features of the aqueduct were enlarged and handsomely reproduced in half-tone prints, and placed on exhibition in the principal schools.

The printed educational matter consisted of three pamphlets: one of 28 pages entitled "A Brief Sketch of the Water Supply System of the City of New York," written by Hon. William Williams, Commissioner of Water Supply, Gas and Electricity; one of 132 pages and cover, entitled "The Catskill Aqueduct and Earlier Water Supplies of the City of New York," * by Edward Hagaman Hall, L. H. D., Secretary of the Mayor's Catskill Aqueduct Celebration Committee; and a third of 8 pages entitled "Water Supply and Public Health," by Charles Bolduan, M. D., Director of the Bureau of Public Health Education of the Department of Health of the City of New York. Five thousand copies of each of the first two and 25,000 copies of the third were printed and distributed largely among the public schools.

Further to stimulate the interest of the children, the Mayor's Committee offered 1200 medals, two to each of the 600 public

* This pamphlet is included, in expanded form, in this history of the Catskill Aqueduct Celebration.

schools, to be awarded to the writers of the best essays on the Catskill aqueduct. These medals were of bronze, 1½ inches in diameter, and were reduced fac-similes of the official medal designed by the celebrated artist, Dr. Daniel C. French.

The Chairman of the Public Schools Committee was Mr. Leo Arnstein and the details were handled by Superintendent John F. Roberts.

# CHAPTER IX

## ART, SCIENTIFIC AND HISTORICAL EXHIBITS

### Co-operation of Thirty-six Institutions

Another feature of the celebration of high educational value, but appealing to a maturer class of people than the public school children, was the series of exhibitions held by various institutions for the advancement of art and learning under the direction of the Committee on Art, Scientific and Historical Exhibits, of which George Frederick Kunz, Ph. D., Sc. D., was Chairman.

This idea of enlisting the co-operation of a large number of such institutions, all at the same time, but each in its own home and maintaining its own individuality, was first developed by Dr. Kunz on a large scale at the time of the Hudson-Fulton Celebration in 1909, and proved to be a distinguished success. One of its merits, as a form of celebration, has been its flexibility and adaptability, not only to different occasions but also to celebrations on various scales. It had been the custom at the great World's Fairs to erect museum buildings for the exhibition of objects of historical, archaeological or art significance, but quite aside from the expense involved, the exhibits in such museums have always had their limitations, due to many causes. Dr. Kunz therefore suggested in 1909 that it would be much better to utilize the existing museums and institutions than to attempt to erect a special building, or even to make a large collection of different kinds of exhibits in one place.

The plan of 1909 was such a success that it was proposed again for the Catskill Aqueduct Celebration, and once more demonstrated its merits as an educational form of celebration. No less than 36 universities, colleges, historical societies, engineering societies, art museums, scientific museums, public libraries, clubs, public departments, and churches, joined in the celebration, each holding an exhibition of its own character and according to its

own resources of material. The names of the participating organizations, with their personal representatives on the sub-committee on Art, Scientific and Historical Exhibits, are as follows:

*American Geographical Society*
John Greenough, President

*American Institute of Civil Engineers*
E. W. H. Pegram, President

*American Institute of Electrical Engineers*
E. W. Rice, Jr., President

*American Institute of Mechanical Engineers*
Dr. Ira N. Hollis, President

*American Institute of Mining Engineers*
Philip N. Moore, President

*American Museum of Natural History*
Dr. Henry Fairfield Osborn, President

*American Numismatic Society*
Edward T. Newell, President

*American Scenic and Historic Preservation Society*
Col. Henry W. Sackett, First Vice-President

*Brooklyn Botanic Garden*
Dr. C. Stuart Gager, Director

*Brooklyn Institute of Arts and Sciences*
Dr. A. Augustus Healy, President

*Brooklyn Museum*
William H. Fox, Director

*City History Club of New York*
Mrs. A. Barton Hepburn, President

*College of the City of New York*
Dr. Sidney E. Mezes, President

*Collegiate Church of St. Nicholas*
Rev. Dr. Malcolm James MacLeod, Pastor

*Columbia University*
Dr. Nicholas Murray Butler, President
Prof. William H. Carpenter, Librarian
Milton J. Davies

*Cooper Union for the Advancement of Science and Art*
Miss Sarah Cooper Hewitt, Trustee
Miss Eleanor G. Hewitt, Trustee

*Department of Parks, Manhattan and Richmond*
Hon. Cabot Ward, Commissioner

*Department of Parks, Brooklyn*
Hon. Raymond V. Ingersoll, Commissioner

*Fraunces' Tavern (The Sons of the Revolution)*
Henry Russell Drowne, Secretary

*Long Island Historical Society*
Judge Willard Bartlett, President

*Metropolitan Museum of Art*
Dr. Robert W. de Forest, President

*Museum of the American Indian*
George G. Heye, Founder

*National Arts Club*
John G. Agar, President

*New York Aquarium*
Dr. Charles H. Townsend, Director

*New York Botanical Garden*
Dr. Nathaniel L. Britton, Director

*New York Genealogical and Biographical Society*
Capt. Richard Henry Greene, Representative

*New York Historical Society*
John Abeel Weeks, President
Robert H. Kelby, Librarian

*New York Public Library*
Dr. Edwin H. Anderson, Director

*New York Society Library*
Frederick de Peyster Foster, Chairman

*New York University*
Dr. Elmer Ellsworth Brown, Chancellor

*New York Zoological Garden*
Madison Grant, Vice-President

*Staten Island Association of Arts and Sciences*
Hon. Howard R. Bayne, President

*Stevens Institute of Technology*
Dr. Alexander C. Humphreys, President

*United Engineering Society*
Charles F. Rand, President
Calvin W. Rice, Secretary

*Van Cortlandt House Museum (Colonial Dames of the State of New York)*
Mrs. Hamilton R. Fairfax, President
Mrs. Elihu Chauncey, Chairman

*Washington Headquarters (Jumel Mansion) Museum (Washington Headquarters Association founded by the D. A. R.)*
Mrs. George Wilson Smith, President
William H. Shelton, Curator

It is impossible to describe in detail the manner in which all these institutions participated in the celebration. Some held public meetings at which addresses were made or formal, sometimes technical, papers were read. Some issued publications. And some held exhibitions. The character of the latter may be judged from a few examples.

The Metropolitan Museum of Art in October, 1917, exhibited a group of paintings "by artists who, full of appreciation for the beauty of the country along the banks of the Hudson river and within the region of the Catskill Mountains, so identified themselves with these sections as to gain the name of the Hudson River School." The bulletin, published by the museum, describing the exhibition, says: "This collection of pictures, besides reminding us of the debt we owe to the men who gave us our most characteristic national art, will take on the value of historical documents through their record of changes brought about by the creation of large bodies of water where formerly were woods and meadows." Quoting William Cullen Bryant's poem called "An Indian at the Burial-Place of his Fathers," in which the Indian expresses the fear that his ancient realm "may be a barren desert yet," the bulletin adds: "The fear was unfounded. Science, of which the Indian knew nothing, has triumphed over nature, and in the Catskill aqueduct has created Art as well as a blessing to mankind forever." The bulletin is an appreciative characterization of the

works of the Hudson River School by Thomas Doughty, Asher B. Durand, Thomas Cole, Frederic E. Church, John F. Kensett, John W. Casilaer, Jasper F. Cropsey, William Hart, James Bricher, David Johnson, Albert Bierstadt, Sandford R. Gifford, Worthington Whittridge, Jervis McEntee, Alexander Wyant and George Innes.

The Brooklyn Museum of the Brooklyn Institute of Arts and Sciences held a special historical exhibition of works of American painters of the period of the early Croton water-supply. The exhibition, which continued from November 1 to November 29, 1917, included 83 works by W. A. Babcock (1826–1899), Albert F. Bellows (1829–1883), Albert Bierstadt (1830–1902), George H. Boughton (1834–1905), William Bradford (1830–1892), William M. Chase (1849–1916), Charles C. Coleman (1840– ), Maurice F. H. De Haas (1832–1895), Asher B. Durand (1796–1886), Frank Duveneck (1848– ), Charles L. Elliott (1812–1868), R. Swain Gifford (1840–1905), Sandford R. Gifford (1823–1880), Regis Gignoux (1816–1882), James M. Hart (1828–1901), William Hart (1822–1894), Winslow Homer (1836–1910), Daniel Huntington (1816–1906), George Innes (1825–1894), Joseph Jefferson (1829–1905), Eastman Johnson (1824–1906), John F. Kensett (1818–1872), John LaFarge (1835–1910), Martin D. Homer (1836–1897), Louis R. Mignot (1831–1871), Charles H. Miller (1842– ), Robert C. Minor (1840–1904), Robert L. Newman 1827–1911), Arthur Parton (1842–1914), William T. Richards (1833–1905), Peter F. Rothermel (1817–1895), Albert P. Ryder (1847–1917), Thomas W. Shields (1849– ), John R. Tilton (1833– ), Charles F. Ulrich (1858–1908), Kruseman Van Etten (1829–1904), Elihu Vedder (1836– ) and Alexander H. Wyant (1836–1892).

The Brooklyn Botanic Garden on October 10, 1917, published a leaflet concerning the mountain and lowland plants of the Catskill aqueduct region, and also the forest problems of the Ashokan water-sheds, and afforded facilities in its library, conservatories and herbariums for the study of literature and specimens.

The American Geographical Society from October 12 to December 10 had on exhibition and printed a list of 24 selected books and 13 maps relating to the water supply of New York City.

The Staten Island Association of Arts and Sciences on October 11 opened an exhibition of specimens of old wooden water pipes used from 1800 to 1835; geological and floral specimens found in the basin of the Silver Lake reservoir; pictures of the Silver Lake basin; etc.

The City History Club in October exhibited maps, pictures and printed matter relating to the water supply and city history generally, and lantern slides relating to similar subjects.

The New York Public Library was the first to open a Catskill aqueduct exhibition. Its collection of memorabilia, arranged by Hon. Victor Hugo Paltsits, was on public view from May 1 to November 6, 1917. It consisted of books, maps, old prints, original drawings, portraits, very valuable manuscript records, specimens of notes issued by the City for the building of the Colles water-works in 1776, and many other objects relating to the various water-sources, natural and artificial, of the city. The building of the Catskill aqueduct was illustrated by large photographs showing the progress of the construction of the dams, tunnels, bridges, reservoirs, roads, etc. A large topographical relief model gave a graphic idea of the region in which the waters of the aqueduct were collected and the country through which the aqueduct was built; and a large model of a section of the Kensico dam gave an excellent illustration of one of the interesting masonry structures of the aqueduct. On account of its central location and the long period of exhibiting, the collection was visited by many thousands of people.

The New York Historical Society devoted its Quarterly Bulletin for October, 1917, largely to the subject of the city's water-supply, and with its valuable resources of material was able to make an exceptionally interesting exhibition. One of the treasures of this venerable society is a portrait of Christopher Colles, painted by John Wesley Jarvis, which was the only publicly known portrait of the projector of the first pipe-line system in New York City until Dr. Christopher J. Colles gave to the Metropolitan Museum of Art the portrait of Colles mentioned on page 694 preceding. The society also took notice of the aqueduct in its interesting series of lectures.

The Van Cortlandt House Museum, which always has on exhibition an interesting collection of historical relics, gave special prominence to a work entitled "Reminiscences of Christopher Colles," by John W. Francis, 1867; prints of the Collect Pond, street pumps, the Manhattan Co.'s water-works, views along the Croton aqueduct, a view of Macomb's mills near King's Bridge, and many other pictures of landmarks and scenes relating to the waters and water-supply of New York from its earliest settlement.

The exhibition at the museum at Washington's Headquarters (Jumel Mansion) was especially interesting from the fact that the west end of High Bridge, which brought the Croton aqueduct on to Manhattan Island, landed on the Jumel property. The Supreme Court records of one of the famous Jumel law-suits state that the site of the High Bridge reservoir was sold to the city by Madam Jumel for $40,000. About the same time, the city bought from the same property the land for High Bridge Park, at a cost of $125,000. For many years thereafter, the lane above the pipe line leading southward across the Jumel lands was called Aqueduct Path. The exhibition in the Jumel mansion contained many objects relating to the early water supplies of the city.

The American Scenic and Historic Preservation Society exhibited, from October 4 to October 31, 1917, in the galleries of the National Arts Club, 59 photographs and prints illustrating the water-supply of the city from the original water-courses at the time of settlement down to the Catskill aqueduct.

# CHAPTER X

## PERMANENT MEMORIAL

### Plan for Recreational Use of Old Reservoir in Central Park

A plan upon which a great deal of enthusiastic work was performed but the fruition of which remains for the future is that for converting the old Croton reservoir in Central Park into a Permanent Memorial of the Catskill aqueduct. As this plan gives promise of ultimate realization, it may be of future interest to record the manner of inception.

At a conference which Messrs. George McAneny, Arthur Williams and Edward Hagaman Hall had with Mayor Mitchel on June 1, 1917, the Mayor expressed the wish that the celebration should leave some permanent memorial of the event celebrated. He also suggested that the form of a fountain would be appropriate. During the following week, Mr. Williams conferred with Mr. Thomas Hastings, the well-known architect, who was a member of the Mayor's committee and who was collaborating with Mr. Frederic MacMonnies, the sculptor, in designing the Angelina Crane fountain for City Hall Park. (See page 821.) Mr. Hastings suggested the propriety of erecting on some suitable site the fountain by Mr. MacMonnies which was erected in staff at the Chicago Exposition in 1893 and which had excited the universal admiration of artists and the public. The question of site was solved most appropriately at this juncture by Hon. William Williams, Commissioner of Water Supply, Gas and Electricity, who informed Mr. McAneny and Mr. Arthur Williams of the intention of his Department soon to abandon the old Croton Reservoir in Central Park.

The opportunity presented by the old reservoir for conversion into a permanent memorial of the Catskill aqueduct, for providing a wonderful place for popular recreation, and at the same time bestowing upon the city a great work of art, appealed at once to the imagination of the members of the Executive Committee,

and to Messrs. Hastings and MacMonnies. Frequent interviews between the executive officers and Messrs. Hastings and MacMonnies ensued, and Mr. Hastings most generously volunteered to prepare plans which should embody the ideas evolved in their several conferences. Thereupon Mr. Hastings plunged into the work with unstinted enthusiasm, not only giving unreservedly of his own valuable professional services, but also placing at the service of the Mayor's committee the necessary drafting force of his office.

As the work progressed, the heads of the two great institutions between which the proposed memorial was to form a connecting link — Dr. Henry Fairfield Osborn,* President of the American Museum of Natural History, and Dr. Robert W. de Forest, President of the Metropolitan Museum of Art — were consulted and gave the committee valuable advice. Mayor Mitchel, Comptroller Prendergast, President of the Board of Aldermen Frank L. Dowling, Borough President Marcus M. Marks, Commissioner William Williams and other public officials were also taken into conference on the subject.

As a result of these mutual interchanges of views, and discussion of the subject in the public press, a fairly well crystallized idea of the most appropriate and practically useful treatment of the reservoir site was formed.

The interesting history of the reservoir site may be briefly recalled before describing the plan for its treatment. In 1838 — fifteen years before the passage of the law establishing Central Park, when that region was a rocky wilderness, used as a general garbage dump, occupied by shanties and bone-boiling establishments, and inhabited by squatters, pigs, hordes of mongrel dogs, chickens, and other animals more or less wild — the City acquired for a receiving reservoir of the Croton Aqueduct then building 37.05 acres of land, bounded by the lines of 79th street, 86th street, Sixth avenue and Seventh avenue as those thoroughfares were laid out on the map by the Street Commissioners appointed pursuant to the act of 1807. This is an area 800 feet wide and over 1800 feet long. Of these 37 acres, 27½ were

* Prof. Osborn had recommended the utilization of the reservoir site in some such manner in February, 1916.

Common Lands of the City. The other 9½ acres consisted of two blocks of 4¾ acres each owned by Hickson W. Field and William Mathews respectively. The City paid $11,000 for each of these two blocks, or $22,000 for the 9½ acres.* On this site a great reservoir, known at that time as "the upper reservoir at Yorkville," † was constructed. Into it, water was admitted with due ceremony on June 27, 1842, and the reservoir has been in continuous use ever since. This area does not belong to Central Park, but is under the jurisdiction of the Department of Water Supply, Gas and Electricity.

With the completion of the Catskill Aqueduct, the need for this reservoir ends, and it is soon to be abandoned, although the larger and more modern reservoir north of the 86th street transverse road will continue in use. It seemed to the Mayor's Committee that it would be particularly appropriate, if it could be arranged, to empty this old reservoir of the outgrown Croton system at the time of the celebration in October, 1917, transfer it to the Park Department, and dedicate the site for use in some beneficial form as the Permanent Memorial of the Catskill Aqueduct. The ceremony of drawing off the Croton water and transferring the reservoir site to the Park Department as a feature of the celebration proved to be impracticable, however, as it was not possible to make certain direct connections between the inflow and outflow pipes of the reservoir so that the reservoir could be cut out and dispensed with in October. It is probable, however, that the transfer can be made as soon as the memorial plans can be perfected and approved by the proper municipal authorities.

It should be said, however, that the plan of the Mayor's Catskill Aqueduct Celebration Committee was not the first or only one for the conversion of the reservoir to a recreational use. Since it first became known that the reservoir site was to be abandoned, no less than thirty-eight different plans for its utilization have been submitted to the Park Department, but most of them were

* The increase in real estate values is indicated by the fact that while these nine and a half acres cost about $2,316 an acre, the land of Central Park — not including improvements — is now valued at about $270,000 an acre on the average. The reservoir site is therefore worth about $10,000,000.

† As distinguished from the lower reservoir at Murray Hill.

at variance with the purposes and traditions of Central Park, and for that and other reasons, none has been approved up to the present time. Profiting by the prevailing public sentiment against any radical change in the use of Central Park, the Mayor's Committee endeavored to develop a plan which would embody the most acceptable features of the schemes previously advanced together with important new ideas, the whole project being entirely in harmony with the original conception of Central Park but greatly increasing its usefulness. Recognizing the fact that the old reservoir was built before Central Park existed, and that this region of the park, with its system of roads, paths, lawns and plantations, has grown up and been moulded around the reservoir, an important feature of the plan is that it is confined to the area of the present reservoir and does not encroach upon or disturb the arrangement of its environment.

Within the reservoir site the Mayor's Committee has aimed to attain four principal objects: First, to meet in a form harmonious with the surroundings the popular desire for larger accommodations in Central Park for recreation, including outdoor music; second, so to treat the site with a noble fountain and water area as to suggest the evolution of the City's water supply system and preserve the historical continuity of the site; third, to improve the opportunity to bestow upon the City a great art-gift, rivaling the most famous of its kind abroad; and fourth, to supply a much-needed connection between the American Museum of Natural History and the Metropolitan Museum of Art.

The plan (see plate 30) contemplates taking off several feet from the height of the present walls where they are above the level of the adjacent ground and constructing upon the lowered embankment a promenade 20 or 25 feet wide, shaded by trees. The material removed from the walls can be used for the work inside the enclosure.

It is proposed to fill up the bottom of the reservoir to the depth of several feet, leaving in the central and northern portion a body of water about 1,000 feet long and 200 feet wide, expanding at the northern end into a semi-circular basin about 400 feet wide. As the present reservoir is divided into two parts by a transverse embankment on the line of 82d street, and as the bottom of the

southern part is about nine feet lower than the bottom of the northern part, the architect expects to avail himself of this physical characteristic for a very interesting cascade treatment between the two levels, somewhat after the fashion of a famous fountain near Madrid, and other examples abroad. The lagoon, as it may be called, can be used in summer for boating and wading; and in winter, protected from the wind, it will afford the finest skating area in the City. It can also be used for very beautiful water pageants on festive occasions.*

In the northern expansion of the lagoon it is proposed to erect in bronze the famous fountain by Frederick MacMonnies which was executed in staff at the World's Columbian Exposition in Chicago in 1893. It represents Columbia, seated in a barge of state, with Fame at the prow blowing a trumpet, and Father Time at the helm steering. The barge is propelled by eight oarswomen, representing the Arts and Sciences — ideas particularly appropriate to the location of the memorial between the Metropolitan Museum of Art and the American Museum of Natural History — and is attended by mermen and mermaids riding on sea-horses. There is no question as to the high rank of this production in the art world. It excited the universal admiration of artists and the public in 1893 and was unhesitatingly accorded the first place in the great exposition. It is referred to in international encyclopedias as the most famous sculptural work of that occasion, and is mentioned by writers, such as Lorado Taft, in his "History of American Sculpture," with high commendation. This fountain would be the artistic gem of the Catskill Aqueduct Memorial. Nine-tenths of the reservoir site — according to the plan — would be devoted to practical uses, developed in rugged and substantial fashion, made attractive by shade trees but free from useless embellishment, where people could get in actual touch with the thing they were enjoying; the fountain would be the

* There is nothing in the plan of the Mayor's Committee to prevent the use of the lagoon as a swimming pool if the city shall deem it wise and appropriate to authorize bathing in Central Park, in years to come. The Committee has no power to determine that question, and leaves details of use and administration to be settled by public sentiment and the municipal authorities in the future. People wishing salt-water baths, however, can reach the sea-beaches for a five-cent fare.

only thing in the scheme designed to appeal solely to the aesthetic sense without utilitarian purpose, but, while occupying little space, would be the crowning art work of its class in the United States.

At the southern end of the lagoon it is proposed to erect a music pavilion capable of holding a large orchestra and chorus, with additional accommodations for a thousand singers around it.

Between the music pavilion and the southern wall of the reservoir it is planned to build a series of terraces rising in succession to the top of the wall. These terraces, rising in stages of about four feet each, are to be faced with the rough stone from the reservoir walls, filled with earth and planted with trees and shrubs, and would afford accommodations, it is thought, for about 25,000 persons who might wish to sit or stand and enjoy whatever performance may be given below. The rugged terraced walls would be void of architectural niceties, but would be covered with vines and present a pleasing appearance. This terrace amphitheatre and the immediate environment of the music pavilion are calculated to fill a long-felt want for better facilities than now exist for popular enjoyment of outdoor music. The bandstand and surroundings on the Mall are confessedly inadequate for this purpose. The terrace amphitheatre might, of course, also be used for many other purposes appropriate to the park.

On each side of the lagoon, about 200,000 square feet of space — 400,000 square feet in all — is allowed in the plan for playgrounds. These playgrounds are a cardinal feature of the project. They are intended to be entirely unlike the lawn playgrounds of Central Park and to increase enormously the recreation resources of the Park. In order to admit of the largest measure of practical usefulness, it is not proposed to convert this area into grass covered lawns, but to make the playgrounds, like those in the Luxembourg Garden in Paris, of dirt covered with gravel, so that they cannot "wear out." It is intended that they shall be shaded by trees. The Luxembourg, which contains about 55 acres, has few lawns and not many flowers, but is characterized by squares enclosed by trees and open spaces for children's games, terraces for promenades, fountains, etc., and has music every summer evening. It is the most frequented promenade on the left bank of

the Seine and one of the most democratic institutions in all Paris. The playground area on the east and west sides of the Central Park lagoon would be nearly four times the area of the field of the City College Stadium and five times the area of Jasper Oval. It would accommodate 25,000 children in informal recreation and twice that number of persons in close formation. On an equal area of the Sheep Meadow playground in Central Park about 400,000 children played in the season of 1915; but if the lagoon playgrounds were not covered with grass, they could be used more intensively and continuously than the Sheep Meadow and, acre for acre, would have many times greater usefulness for recreation purposes.*

The idea of the terrace and playground treatment of the main area referred to is to provide practicable and usable accommodations for large numbers of people, both on promenades and playgrounds, avoiding such delicate ornamentation as may impose undue restraint and yet preserving a park-like appearance in harmony with the situation. It is not intended to be a formal picture garden, to be looked at and not touched; but a great playground, where children can play, run and jump to their hearts' content, without getting "lost" in intricate winding paths, and where their elders can enjoy themselves appropriately in other ways. The artistic focus of the scheme will be the wonderful MacMonnies fountain at the northern end of the lagoon.

Paralleling these playgrounds on either side, and between them and the tops of the east and west walls, it is proposed to build one or two terraces affording additional space for play, promenading, resting, or observation of what is taking place on the lower levels.

It is estimated that nearly 100,000 persons altogether could be accommodated if all the available land space in the proposed plan were occupied.

Upon the top of the embankment at both the north and south ends the plan provides for a broad driveway or esplanade, connecting, by means of driveways of ordinary width, with the adjacent drives on the east and west, thus making convenient avenues

* Park Commissioner Ward estimates, on the basis of the average of eighteen different days at different seasons of the year, that 49,000,000 persons used Central Park in 1916.

of communication between the American Museum of Natural History and the Metropolitan Museum of Art. This provision for connections between the museums, it is believed, will have an important effect on the scientific and art life of the City. At present, many persons living on the east side of the City are deterred from visiting the American Museum of Natural History, and many on the west side from visiting the Metropolitan Museum of Art, by the lack of connecting drives. Many visitors from out of town, who wish to visit both museums on the same day, are similarly inconvenienced. The plan therefore contemplates meeting the needs of the museums for easier intercommunication.

In the vista looking northward, rising above the leafy background of the MacMonnies fountain, will appear the majestic white plume of the jet-fountain described on pages 840–842 preceding.

The effect of the proposed treatment of the lower reservoir would be that, viewed from the outside, there would be no change in its present aspect except that in places its walls would be lowered several feet and instead of the present rigid top-line of masonry would appear a varying crestline of trees and shrubs. The interior view, however, would be a complete transformation from a plain, rectangular water surface to an area diversified by terraces, trees, shrubs, promenades, etc., with a beautiful fountain at one end of a lagoon and a pavilion for musical and other exercises at the other.

From the point of view of economics, the plan is the cheapest in proportion to the results obtained that could be devised. To dig such a place to-day would cost millions; and to fill it up and endeavor to mould it topographically into the rest of the park would cost as much. From the engineering standpoint, the "cuts" and the "fills" could be so calculated that it would not be necessary to go outside for material; and the character of the development proposed is such as to require a minimum cost for upkeep. There would also be no waste of water. The water of the jet fountain in the upper reservoir, as before stated, falls back into that reservoir and is saved, the operation serving somewhat to aerate and improve the water. The water for the MacMonnies

fountain and lagoon would be surplusage, of which, the committee is informed, about 1,000,000 gallons a day would be available without expense for at least fifteen years. Furthermore, the water from the lagoon could be led to the lower lakes in the park, thus freshening their water and affecting additional economy.

The foregoing plan was freely discussed at the meetings of the Executive Committee, and on two particular occasions opportunities were afforded for a wider test of public opinion. At the meeting at the Union League Club on July 19, 1917, representatives of the press were invited to be present while Mr. McAneny, Mr. Arthur Williams and Mr. Hastings explained the plan so that its details might be communicated to the public through the press. Again, on August 2, Mr. Williams gave a luncheon at the Bankers' Club at which Mayor Mitchel and about thirty other prominent citizens were present and the merits and alleged demerits of the plan canvassed.

Meanwhile, the press freely discussed the subject. One paper, which strongly advocated adult bathing in Central Park, violently criticized the plan. Other criticism appeared to be based on ignorance of what the plan was proposed to accomplish. Some printed and oral denunciations were uttered by persons who seemed to think that anything in the nature of a "sunken garden," an "Italian garden," or a "Luxembourg garden" must certainly be an aristocratic institution intended for the benefit of the wealthy few — an unfortunate misapprehension due to ignorance. In some cases where such criticisms emanated from presumably intelligent sources, they appeared to be designed to stir up among ignorant people opposition to the municipal officials who were actual or prospective candidates for re-election at the following November election and under whose auspices this noble scheme might possibly be launched.

As the public discussion in some quarters had drifted so far away from the merits of the question, and as the condition of the municipal treasury did not warrant any substantial appropriation of funds for carrying out the project immediately, it was decided to postpone to a more propitious time the completion of the detailed plans and their submission to the City authorities for approval. It is believed that at the right time, large private gifts may be secured to supplement the public funds in carrying out the project.

# CHAPTER XI

## OFFICIAL MEDAL AND BADGE

### The Official Medal

If the Catskill Aqueduct Celebration leaves no other permanent memorial it has one in the official medal. As might have been expected of a work designed by Daniel Chester French, Litt. D., the celebrated sculptor, and executed under the direction of Robert W. de Forest, LL.D., President of the Metropolitan Museum of Art and President of the Art Commission of the City of New York, the medal was pronounced by connoisseurs to be one of the finest examples of medallic art yet produced in America. (See plate 25.)

Dr. de Forest, who was Chairman of the Medal Committee, had as his colleagues Mr. Arthur Williams, Chairman of the Executive Committee; John B. Pine, L. H. D., formerly of the Art Commission of the City of New York; Mr. Edward T. Newell, President of the American Numismatic Society; and Edward Hagaman Hall, L. H. D., Secretary of the Mayor's Committee.

On the obverse of the medal, in high relief, is represented the symbolic head of the City of New York. A suggestion of a Dutch headdress conveys an idea of the historical origin of the City. Inconspicuously beneath the neck are the initials of the sculptor, D. C. F.

On the reverse is depicted a youthful but virile figure standing erect in graceful poise, holding on his left shoulder a vase of classic form from which gush the life-giving waters of the new aqueduct. In the background can be discerned the outlines of the Catskill mountains where these waters rise. Across the field of the medal is the following inscription:

TO COMMEMORATE THE COMPLETION
OF THE CATSKILL AQUEDUCT
AN ACHIEVEMENT OF CIVIC SPIRIT
SCIENTIFIC GENIUS AND FAITHFUL LABOR
1905 NEW YORK 1917

The medal was executed in two sizes, namely, three inches and an inch and a half in diameter; and in two metals, the large size in both silver and bronze, and the small size in bronze only.* The large medals were all cast in moulds, producing a surface much admired by connoisseurs; and the small ones were struck from dies.

As previously stated, large silver medals were publicly presented at the official dinner on the evening of October 12, 1917, to the following persons:

Hon. John Purroy Mitchel, Mayor of New York, under whose administration the aqueduct was completed.
Hon. George B. McClellan, ex-Mayor of New York, under whose administration the aqueduct was begun.
Hon. Charles Strauss, Commissioner of Water Supply.
Hon. Charles N. Chadwick, Commissioner of Water Supply.
Hon. John F. Galvin, Commissioner of Water Supply.
Hon. John A. Bensel, ex-Commissioner of Water Supply.
Hon. Charles A. Shaw, ex-Commissioner.
The family of the late Hon. J. Edward Simmons, Commissioner of Water Supply.
J. Waldo Smith, Chief Engineer of the Board of Water Supply.

In addition to the foregoing medals bestowed upon individuals, one medal was conferred collectively on all the assistant engineers, contractors, workmen and others who contributed to the successful building of the aqueduct. This was probably a unique recognition, in a public ceremony, of those inconspicuous services which are as essential to the carrying out of a great enterprise as the services of the few prominent officials. As it was impossible, however, to select a single assistant engineer, a single contractor,

* Permission was given to Mr. J. P. Morgan to have one made in gold for his collection.

a single laboring man, or a single woman teacher or settlement worker, who could be justly honored above his or her co-laborers in their respective classes, it was decided to add a special inscription to one silver medal, embodying a tribute to all, and to place it on deposit with some distinguished organization. The medal was therefore temporarily placed in Mr. J. Waldo Smith's hands by the Mayor in the public ceremonies at the official dinner, and later was committed to the custody of the American Society of Civil Engineers, with the following letter:

THE MAYOR'S
CATSKILL AQUEDUCT CELEBRATION COMMITTEE
TO THE AMERICAN SOCIETY OF CIVIL ENGINEERS

To commemorate the completion of the Catskill Aqueduct the Mayor's Catskill Aqueduct Celebration Committee caused to be made an Official Medal from Designs by Daniel Chester French. The purpose of the medal is to embody in permanent form the City's tribute to all those whose Character, Intellect and Labor accomplished this great municipal undertaking and engineering triumph. This tribute has been expressed in part in the inscription embodied in the design of the Medal:

TO COMMEMORATE THE COMPLETION
OF THE CATSKILL AQUEDUCT
AN ACHIEVEMENT OF CIVIC SPIRIT
SCIENTIFIC GENIUS AND FAITHFUL LABOR
1905 NEW YORK 1917

The Mayor's Committee bestowed a few of these Medals upon Individuals who have been prominently identified with the building of the aqueduct, but justice requires that evidence should also be given in some special manner of the City's appreciation of those whose services, if less conspicuous in the public eye, were equally indispensable to the accomplishment of this monumental work. The Mayor's Committee has therefore had prepared one Medal with this additional inscription:

TO ALL WHO HAVE CONTRIBUTED BY
THEIR VISION, GENIUS, LOYALTY AND LABOR

This Medal the Mayor's Committee hereby entrusts to your keeping, with the request that you preserve it with the care to which

its significance entitles it, and to exhibit it as a well-merited testimony of public gratitude to those to whom it is addressed.

GEORGE MCANENY
Chairman of the Mayor's Committee
ARTHUR WILLIAMS
Chairman of the Executive Committee
EDWARD HAGAMAN HALL
Secretary.

New York, October 12, 1917.

On Wednesday, February 28, 1918, Mr. Arthur Williams gave an informal luncheon at the Union League Club in honor of Governor Charles S. Whitman, members of the Board of Estimate and Apportionment, members of the Executive Committee of the Mayor's Committee, and the Chairmen of sub-committees, on which occasion large medals were presented.

In delivering the silver medal to Governor Whitman, Mr. McAneny said:

"It gives me unusual pleasure, Governor Whitman, to be able, on behalf of this Committee, to make this presentation to you. You are familiar with the plans that were carried out by a Committee of 750 citizens appointed by Mayor Mitchel, with the plans that comprehended not only the celebration of the coming-down of the waters from the Catskill, but the completion of all of the work incidental to the delivery of the water supply and by coincidence on the seventy-fifth anniversary of the coming-down of the Croton Water and the dedication of the great reservoir then at 42nd Street.

"It proved to be, as we must all recognize, an unfortunate year for a celebration that carried with it the usual outer manifestations of joy. It seemed to the Committee, and I have no doubt you will agree, that the actual ceremonies should be simple in their character, that there should be nothing done that involved any extensive outlay of moneys, either public or private, and that the satisfaction and content of the people themselves should be the thing to be celebrated and by them in their own way.

"Mr. Williams has referred to my Chairmanship of the Committee. I assure you that it has been most titular and that he, as Chairman of the Executive Committee, organized the work which we are in a sense winding up to-day. Mr. Towne has been the spirit of it all, from years ago, and I think it was at his suggestion the plan for the celebration was undertaken. It is his suggestion which Mr. Williams has completed.

"During the course of the public banquet given upon this simple scale and plan the presentation of medals was made to the members of the Board of Water Supply and to its Chief Engineer. The City recognized in them a body of public servants who had done an extraordinary thing in a highly creditable and commendable way; the City recognized a debt of gratitude to them that it found this opportunity joyfully to acknowledge and to fulfill. They have represented the City in this work. Without the cooperation of the authorities of the State they would have made but little headway. The City itself would never have been able to have brought this thing to pass. But from the beginning the State that you now so happily represent has cooperated with the town through its authorities and through the action of its Legislature, through its courts, through every means necessary to accomplish the great task of harnessing the Catskill waters and of bringing them across sister counties for their delivery in this great City. But in the administrations of the State during the years covered by this great work there has been no one at Albany whose heart and sympathy have been in this matter in greater degree than your own. We have recognized that you, as a citizen of New York, have appreciated, perhaps even more than another, what this meant to the City, to its life, its trade, the public health and to everything that would go to make its future greatness. And in recognition of the great importance of this work which has had your support and in which you have so fully cooperated with the City authorities and with those who have informally represented the City, we want you to have a distinctive souvenir of the work; something that you will treasure, amongst innumerable things of the same character no doubt; something that you will nevertheless treasure as a real mark of our appreciation of your sympathy and of your cooperation. This Medal is a copy of the several medals that have been distributed; a copy of the original prepared by Mr. Daniel Chester French. It is his work and it is singularly beautiful.

"I present it to you, sir, with the confidence and esteem of the people of New York and the confidence and esteem of this group of men in particular.

"We have been extremely fortunate in our ability to bring together behind a plan of this kind just the men who have been brought behind it. There has never been a committee or a body of public character within my memory in New York that has so ably and so literally represented everything the City stands for. It is for these men, speaking through them for the City of New York, that I have the honor to ask you to accept this medal."

Responding to the presentation of the medal, Governor Whitman spoke as follows:

"Mr. Chairman, Mr. McAneny and Gentlemen:

"I cannot tell you how much I appreciate this honor and your kindness and thoughtfulness and your generosity. I am very proud, and always shall remember with pride, that it has been my privilege, for it has been my privilege, to do what little the Executive of the State has been able to do, which has not been very much, to help on in this tremendous undertaking — in this great work, in some points of view, and some ways the greatest of its kind, perhaps, ever undertaken in this country or in any country. Of course, it has been a privilege to do what little I have been able to do. No man, coming from this great City, interested in it, and familiar with all that concerns it, or with much that concerns it, as I have been for many years, could have done anything less or taken any other position or action.

"You and I live in the most wonderful city, in the most wonderful State, in the most wonderful country in the world. We are confronted, we citizens of New York City, as well as all the citizens of the State and the Nation, with problems that are serious problems and difficult problems, with conditions that are unique, and perhaps exist no where else in the world, at least no where else in this land of ours. As some of you know, during the months past, I have been cooperating with the local authorities and local committees and public-spirited citizens, and I believe no where else on earth are to be found more high-minded, devoted, conscientious, patriotic, and public-spirited men than are to be found in New York City. They are not always found in public office in New York City, unfortunately. They are not always appreciated by those who ought to appreciate them and who receive the greatest benefit from their services. But I know I am speaking to men who know as well as the speaker, when I assure you that the great service rendered to this City by its citizens as well as by its officials, in connection with this great work, is being rendered to-day unselfishly and modestly, but constantly and conscientiously, in an emergency, and a very serious emergency, in connection with the great war. The men whose names perhaps are not found on the public payroll, men who have not been elected to office, are to-day the men to whom the Executive of the State and the Executive of the Nation must look at a time of national distress and national peril.

"Gentlemen, I thank you more than I can tell you for the kindness manifested toward me. I realize it is toward me as a public official, but it is to me a very affecting and touching cere-

mony. It is a great privilege to be with you, a great privilege to feel that in the anxious days which are mine, in the very serious tasks which, for the time being, are mine, laboring under the very great responsibilities which, for the time being, the Executive of this State, whoever he may be, must necessarily have, I have the friendship and the support, as I have had the assistance, without stint, from the good citizens, from the high-minded men who make up this great City in which we live and which we love so dearly."

The other recipients of large medals on this occasion, most of whom were present, but some of whom received them *in absentia,* were as follows:

Hon. William A. Prendergast, Comptroller.
Hon. Frank L. Dowling, President of the Board of Aldermen.
Hon. Marcus M. Marks, President of Manhattan Borough.
Hon. Lewis H. Pounds, President of Brooklyn Borough.
Hon. Douglas Mathewson, President of Bronx Borough.
Hon. Maurice E. Connolly, President of Queens Borough.
Hon. Calvin D. Van Name, President of Richmond Borough.
Hon. William Williams, Commissioner of Water Supply, Gas and Electricity.
Hon. Cabot Ward, Park Commissioner for the Boroughs of Manhattan and Richmond.
Hon. George McAneny, Chairman of the Mayor's Catskill Aqueduct Celebration Committee and member of the Executive Committee.
Hon. Arthur Williams, Chairman of Executive Committee.
Leo Arnstein, Chairman of Public Schools Committee.
Nicholas F. Brady, Chairman of Illuminations Committee.
William C. Breed, member of Executive Committee.
William Hamlin Childs, member of Executive Committee.
Robert Grier Cooke, Chairman of Civic Bodies Committee.
Robert W. de Forest, Chairman of Medal Committee.
Hon. Elbert H. Gary, Chairman of Dinner Committee.
Edward Hagaman Hall, L. H. D., Secretary, and member of Executive Committee.
Thomas Hastings, designer of permanent memorial.
George Frederick Kunz, Ph.D., Sc. D., member of Executive Committee and Chairman of Museums Committee.
Walter Laidlaw, Ph.D., Chairman of Religious Observances Committee.
William J. Lee, Chairman of Pageant Committee.
John W. Lieb, Jr., member of Executive Committee.
Samuel L. Martin, member of Executive Committee.

Hon. William McCarroll, member of Executive Committee.
William Fellowes Morgan, Chairman of City Hall Committee.
Charles H. Strong, member of Executive Committee.
Hon. Henry S. Thompson, member of Executive Committee.
Henry R. Towne, member of Executive Committee.
The family of the late Isaac N. Seligman, Treasurer, and member of the Executive Committee.

Medals were also presented to a few leading institutions such as the Metropolitan Museum of Art, the New York Public Library, the American Numismatic Society, the Brooklyn Institute of Arts and Sciences, etc.

Subscriptions for the large medals were received from the public up to December 15, 1917, through the American Numismatic Society, the price for the silver medal being $25 and for the bronze medal $7.

Of the smaller medal, 2,000 were struck. Twelve hundred were given to the public schools — two to each of the 600 schools — as prizes for the best essays by pupils on the subject of the aqueduct. About 750 were sent to the members of the Mayor's committee who were charged $1 each for them, and a few were sold to persons not members of the Mayor's Committee. No effort was made for a large public sale of these interesting souvenirs.

### The Official Badge

The official badge consisted of a bar, ribbon, and circular medallion 1⅜ inches in diameter. (See plate 26.)

Upon the obverse of the medallion is represented a classically draped seated female figure personifying the City of New York. In her extended left hand she holds a goblet. At the side of her seat is a shield bearing the coat-of-arms of the City. And in the background behind her, the Woolworth building tower and the spire of St. Paul's chapel give a further suggestion of the city. Opposite the seated figure is the figure of an Indian, personifying Ashokan or the Spirit of the Mountains, advancing and pouring water from an Indian jar into the goblet. Behind him are mountains, representing the Catskills. In the sky above these figures, a constellation of five stars symbolizes the five boroughs forming the city, and below them is the date 1917. The whole design

symbolizes the delivery of water from the Catskill Mountains to the five boroughs of the City of New York in 1917.

On the reverse, is a circular inscription "Catskill Aqueduct Celebration," separated by a laurel wreath from the following central inscription:

Aqueduct
Begun 1907
Completed 1917
Total length
from Ashokan
to New York
120 Miles

Upon the bar of the badge are the words:

Mayor's Catskill Aqueduct
Celebration Committee

The ribbon is of the official colors of the City, orange, white and blue.

The badge was designed by the Secretary of the Mayor's Committee and manufactured by Dieges & Clust. These badges were furnished only to members of the Mayor's Committee, at their own expense, and were not sold as souvenirs.

Plate 1

See page 651

MAP OF CATSKILL AQUEDUCT

The Aqueduct is 120 miles long from Ashokan Reservoir to Staten Island and supplies all five Boroughs of the City of New York

LIBRARY
OF THE
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Plate 2

See page 670

Ruins of Ancient Aqueduct on the Campagna at Rome

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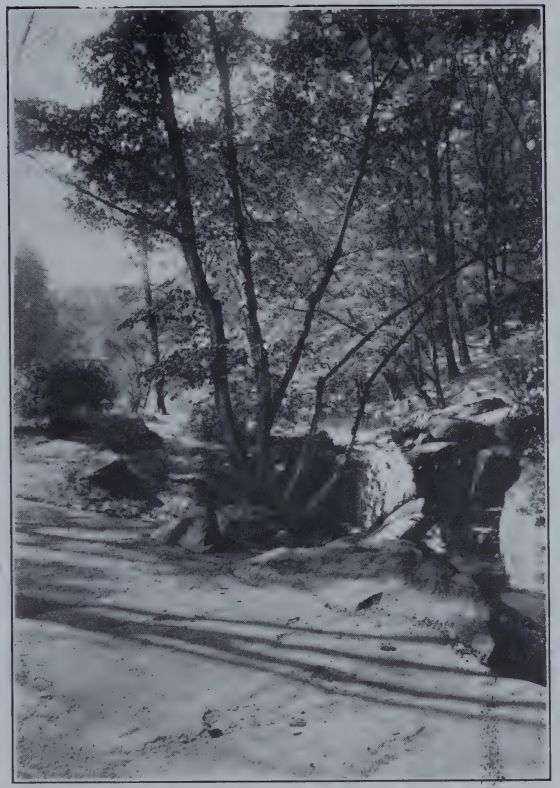

Plate 3

See page 673

NEW YORK CITY'S EARLY WATER SUPPLY

Ancient Water-courses of Manhattan Island Still Flowing in Central Park

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Plate 4

See page 677

NEW YORK CITY'S EARLY WATER SUPPLY

Holland's view of Federal Hall in Wall street, at head of Broad street, in 1797, showing street pumps in Broad street

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This is a fair copie of ye Engen arrived from London and now in ye City Hall 7 feete wide on ye board and 9 feete ye worke poole 73 feete long in ye whole manned by 12 tugmen eleven bucketh men and 1 pike man

Plate 5

See page 684

NEW YORK CITY FIRE DEPARTMENT
Stoutenburg's sketch of the first engine, 1732

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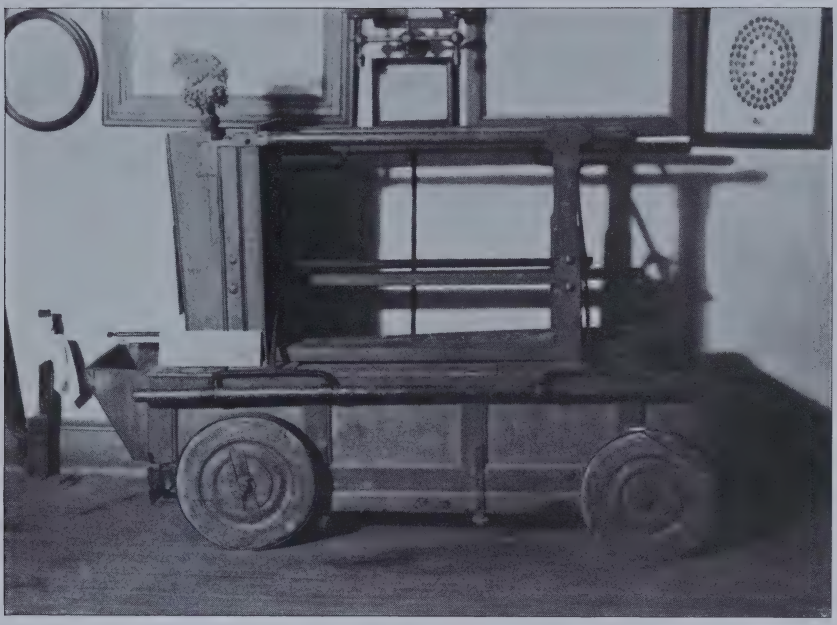

Hand-pump engine period of 1732

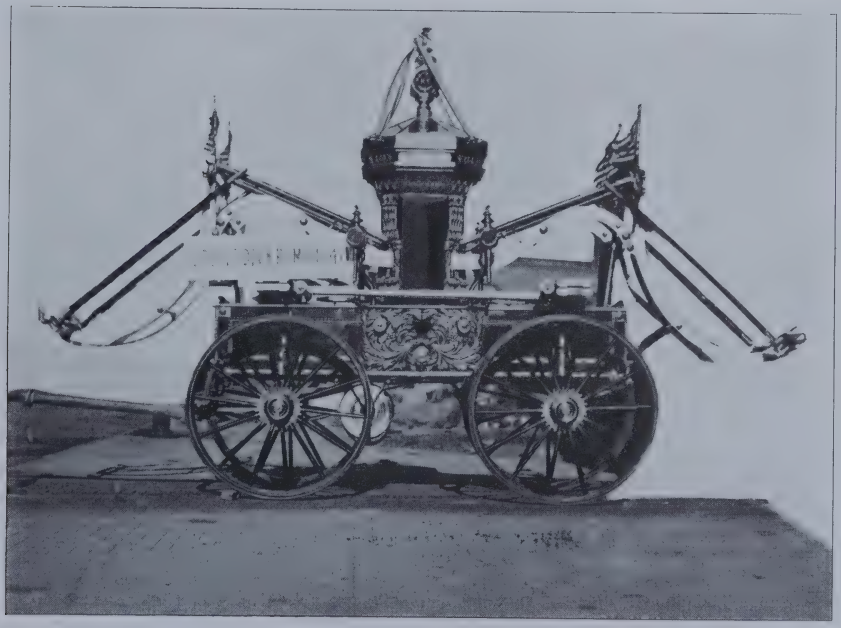

Plate 6

See page 685

Double-deck hand-pump engine, 1840

New York City Fire Department

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Horse-drawn steam fire engine, type of 1865

Plate 7

See page 685

Self-propelled steam fire engine, type of 1916

New York City Fire Department

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Plate 8

See page 717

NEW YORK CITY'S EARLY WATER SUPPLY

Reservoir of the Manhattan Company in Chambers street in 1825

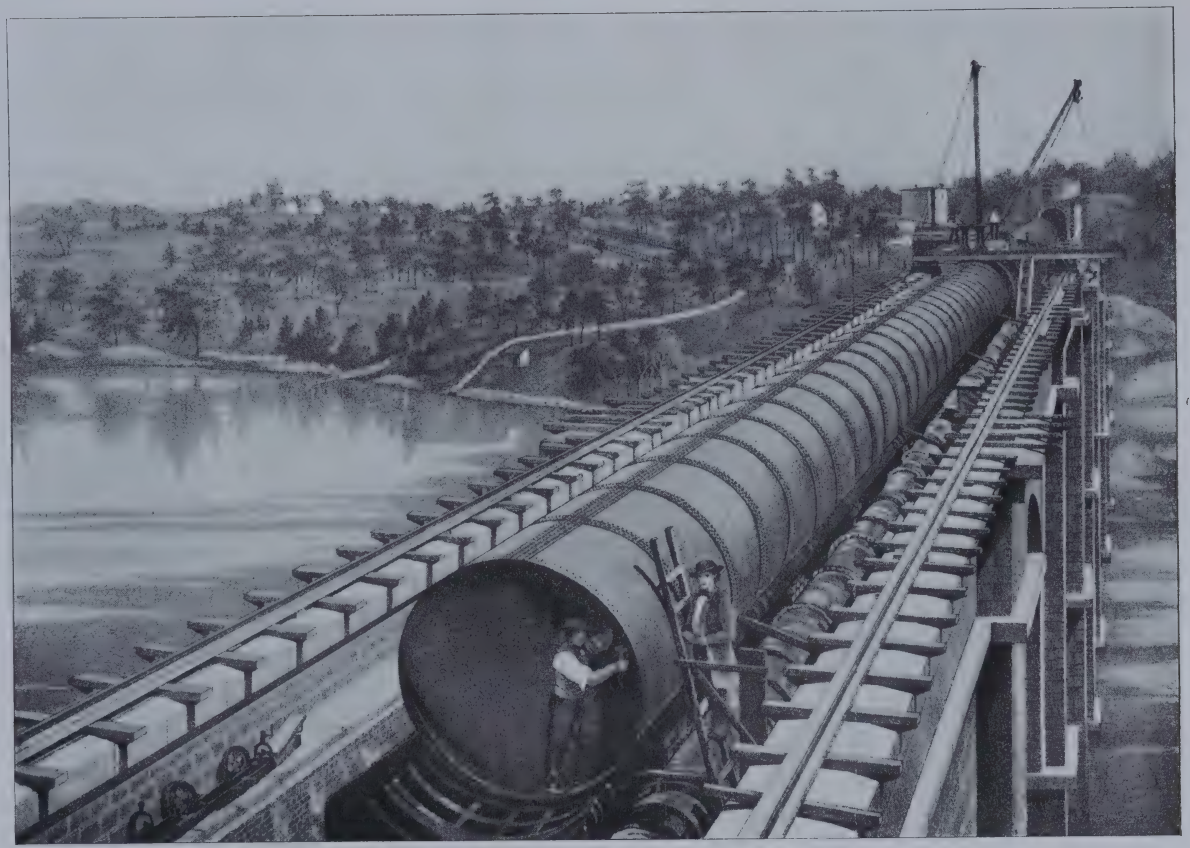

Plate 9

See page 739

THE CROTON AQUEDUCT

Laying the 90-inch main on High Bridge in 1861

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Plate 10

See page 738

THE CROTON AQUEDUCT

View of High Bridge from Manhattan shore in 1917

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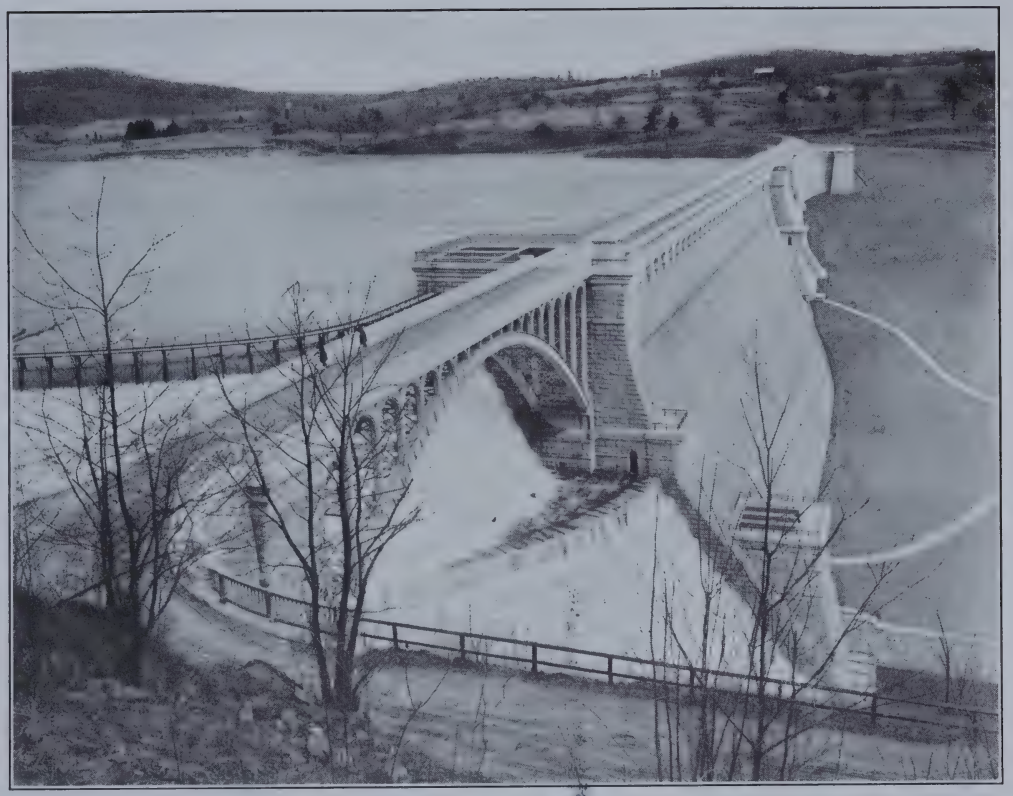

Plate 11

See page 744

THE CROTON AQUEDUCT

New Croton Dam in Westchester County

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Plate 12

See page 778

THE CATSKILL AQUEDUCT

Ashokan Reservoir, looking west across reservoir, November 3, 1916

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Plate 13

See page 780

THE CATSKILL AQUEDUCT

Ashokan Reservoir, looking west from middle dike, November 3, 1916

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Plate 14

THE CATSKILL AQUEDUCT

Ashokan Reservoir: Dividing Weir Bridge

See page 781

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Plate 15

See page 781

THE CATSKILL AQUEDUCT

Ashokan Reservoir, view from Winchell Hill, November 1, 1916

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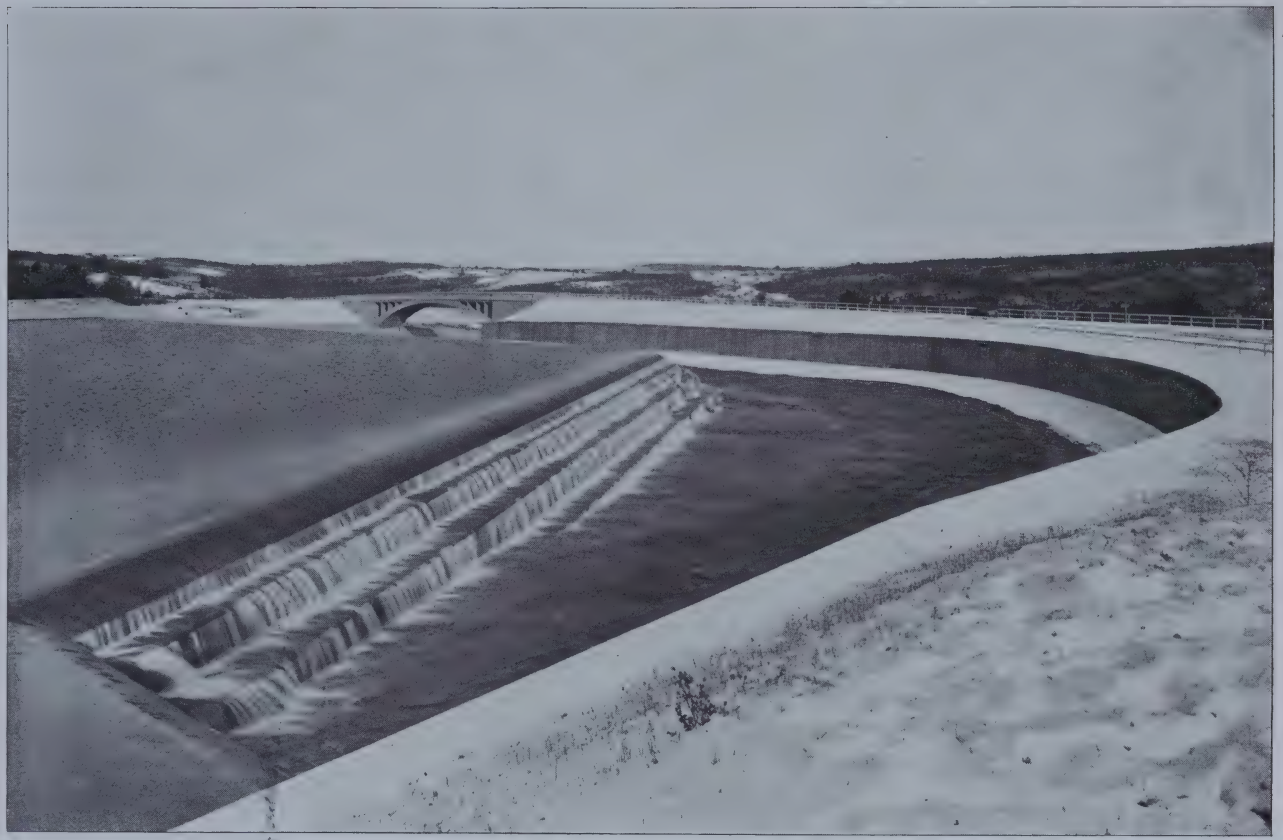

Plate 16

See page 781

THE CATSKILL AQUEDUCT

Ashokan Reservoir, waste weir, spillway channel and bridge, December 13, 1916

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Plate 17

THE CATSKILL AQUEDUCT

Ashokan Reservoir, Aerating Basin

See page 781

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Plate 18

See page 785

THE CATSKILL AQUEDUCT

Rondout Pressure Tunnel, 14½ feet in diameter, July 20, 1910. Finished portion shows junction of concrete lining and rock. Arch has since been finished in upper foreground, typical of other pressure tunnel work

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Plate 19

See page 785

THE CATSKILL AQUEDUCT

Bonticou Grade Tunnel, 17 feet high, 13 feet 4 inches wide, typical of other grade tunnel work

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Plate 20

THE CATSKILL AQUEDUCT

Cut and cover work

See page 784

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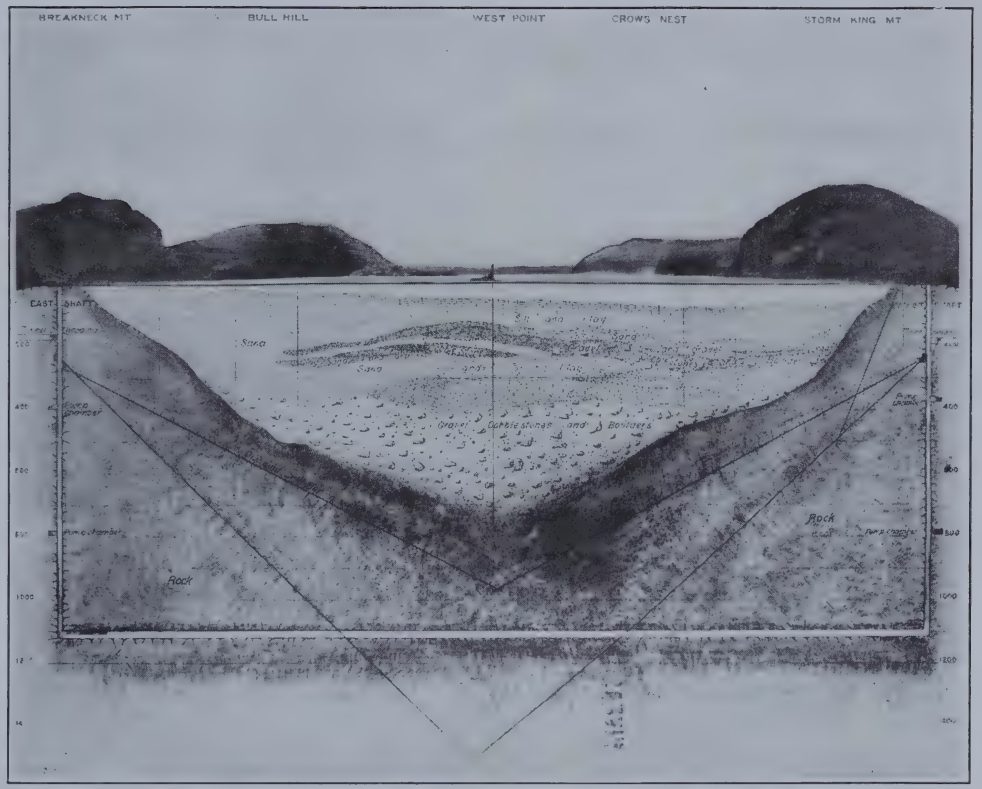
East Side of River




West Side of River

Plate 21

See page 790

THE CATSKILL AQUEDUCT

Crossing Under Hudson River Between Storm King and Breakneck Mountains
The diagram shows the diagonal borings which met in solid rock and determined the location of the horizontal tunnel between their meeting points

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Plate 22

THE CATSKILL AQUEDUCT

Kensico Dam at Valhalla, in Westchester County

See page 793

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Plate 23

See page 797

THE CATSKILL AQUEDUCT

Method of Laying the 30-inch Flexible Pipe-line Across the Narrows

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Mount Prospect Laboratory, Brooklyn

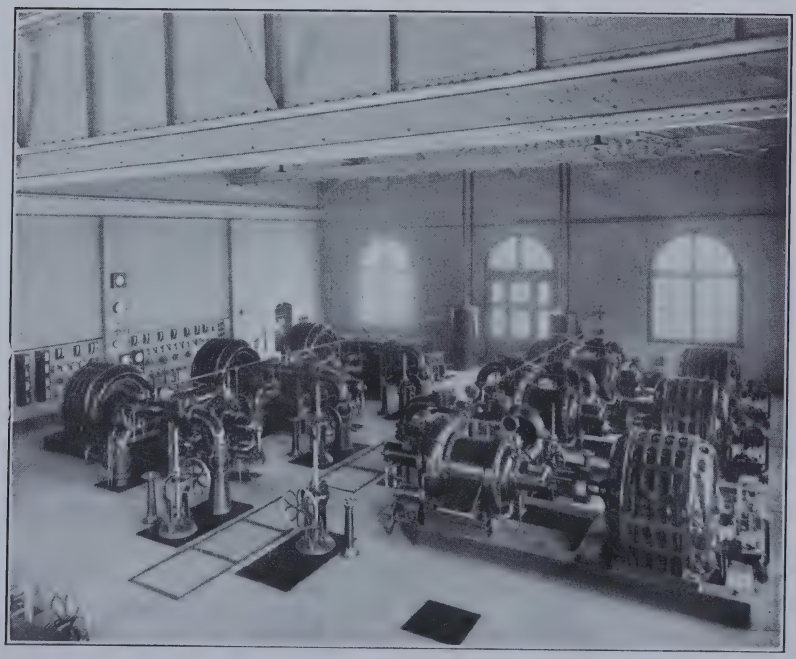

Plate 24

See page 800

THE CATSKILL AQUEDUCT

South Street High Pressure Fire Service Station, Manhattan

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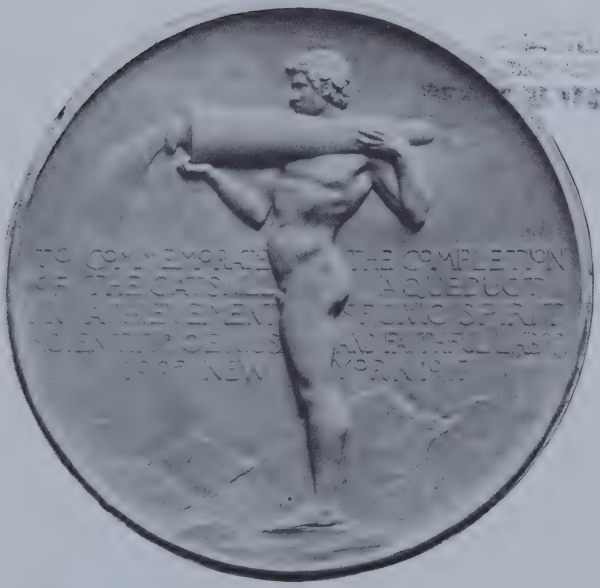
Obverse



Reverse

Plate 25

See page 902

THE CATSKILL AQUEDUCT CELEBRATION

Official Medal

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Plate 26

See page 909

The Catskill Aqueduct Celebration
Official Badge

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Plate 27

See page 840

THE CATSKILL AQUEDUCT CELEBRATION

Mayor Mitchel Turning on the Catskill Water in Central Park

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Plate 28

See page 840

THE CATSKILL AQUEDUCT

Jet Fountain in Central Park

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Looking North from the Belvedere

Plate 29

See page 893

Looking South Toward the Belvedere

Old Croton Reservoir in Central Park

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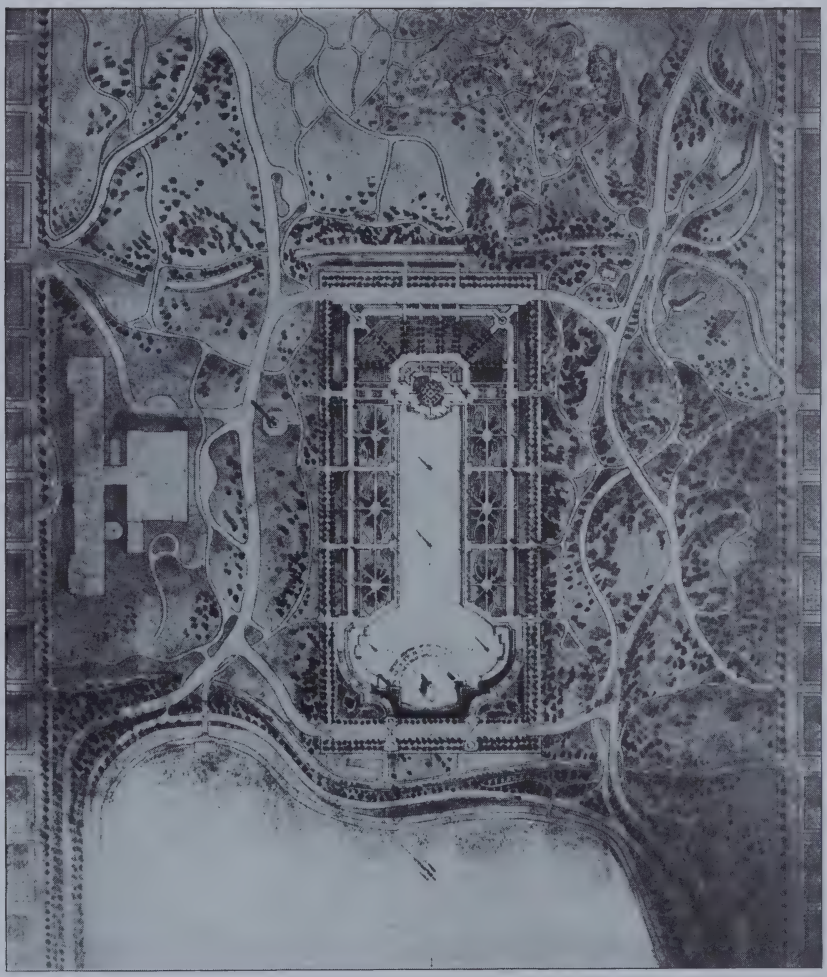

Plate 30

See page 896

CATSKILL AQUEDUCT MEMORIAL

Plan for Transforming Croton Reservoir

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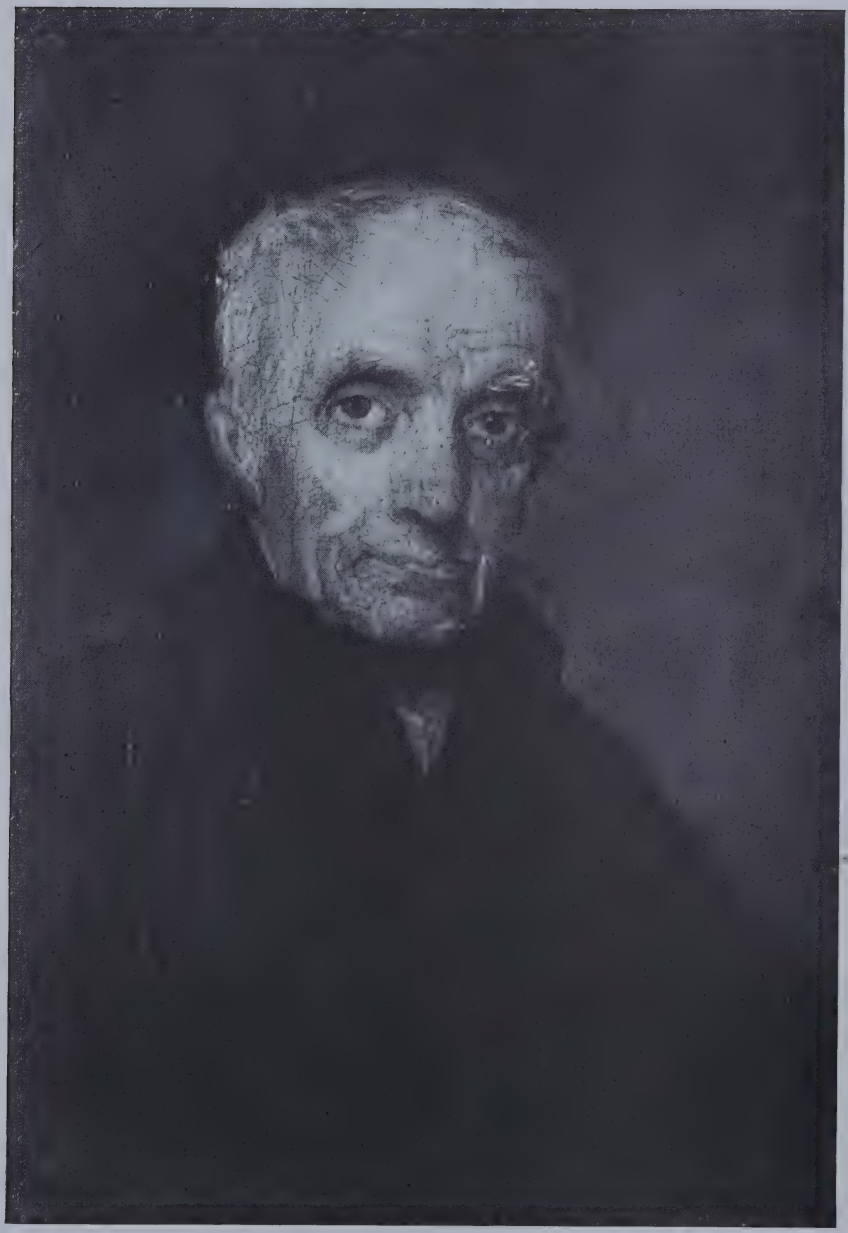

Plate 31

See page 694

PORTRAIT OF CHRISTOPHER COLLES

By John W. Jarvis

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Plate 32

See page 694

Portrait of Christopher Colles

By Unknown Artist

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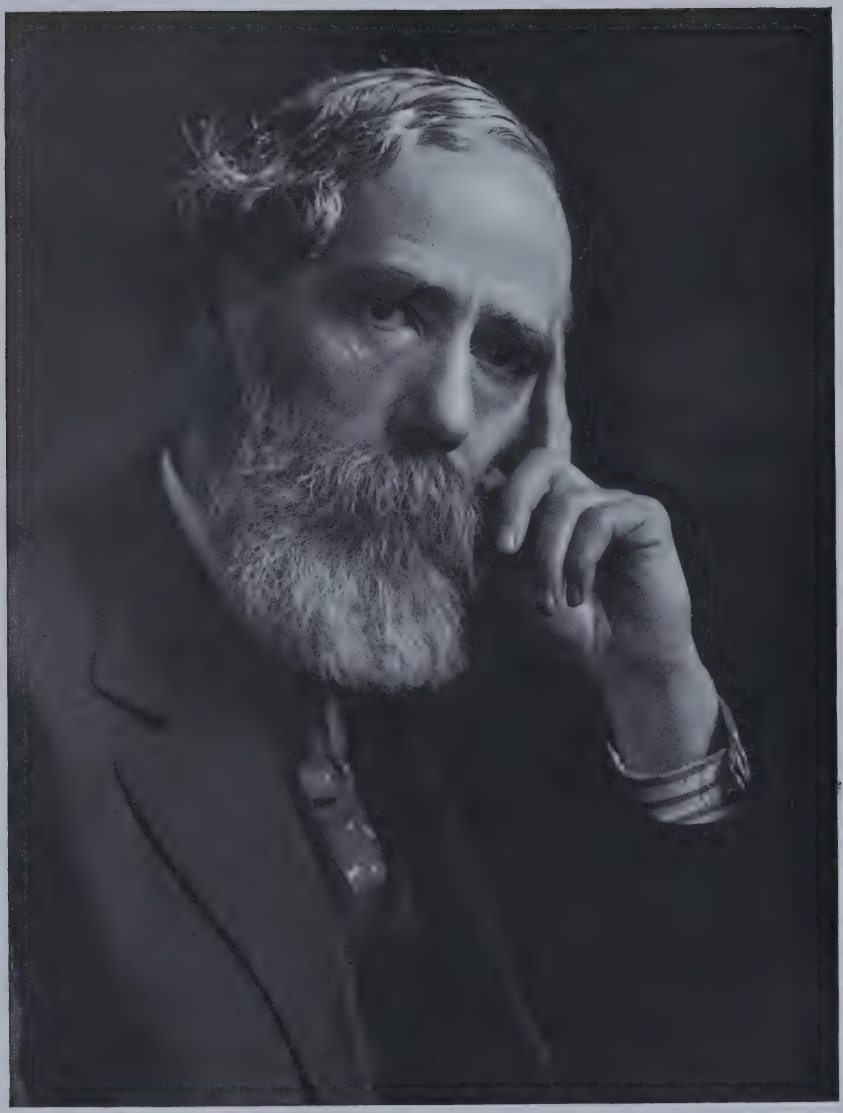

Plate 33

See page 5.

HENRY M. LEIPZIGER, Ph.D., LL.D.

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Plate 34

See page 588

Brick Presbyterian Church, New York

First Building, Erected 1767

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Plate 35

See page 600

Brick Presbyterian Church, New York

Present Edifice at Fifth Avenue and Thirty-seventh Street, in 1918

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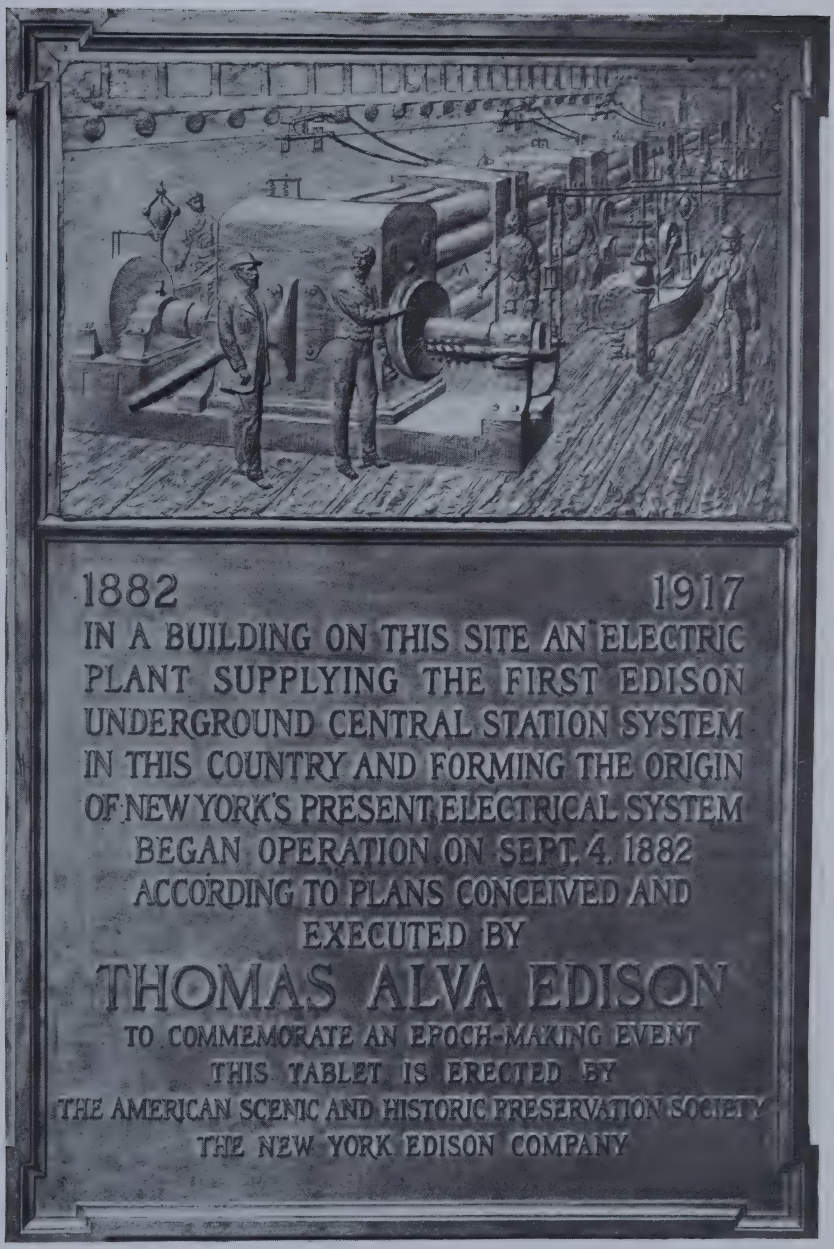
1882 1917
IN A BUILDING ON THIS SITE AN ELECTRIC
PLANT SUPPLYING THE FIRST EDISON
UNDERGROUND CENTRAL STATION SYSTEM
IN THIS COUNTRY AND FORMING THE ORIGIN
OF NEW YORK'S PRESENT ELECTRICAL SYSTEM
BEGAN OPERATION ON SEPT. 4. 1882
ACCORDING TO PLANS CONCEIVED AND
EXECUTED BY
THOMAS ALVA EDISON
TO COMMEMORATE AN EPOCH-MAKING EVENT
THIS TABLET IS ERECTED BY
THE AMERICAN SCENIC AND HISTORIC PRESERVATION SOCIETY
THE NEW YORK EDISON COMPANY

Plate 36

See page 157

First Edison Power Station Tablet

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UNIVERSITY OF

Plate 37

LAND BATTLESHIP "RECRUIT" IN UNION SQUARE, NEW YORK

See page 175

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New Utrecht Mile-Stone

Plate 38

Van Pelt House in New Utrecht

See page 246

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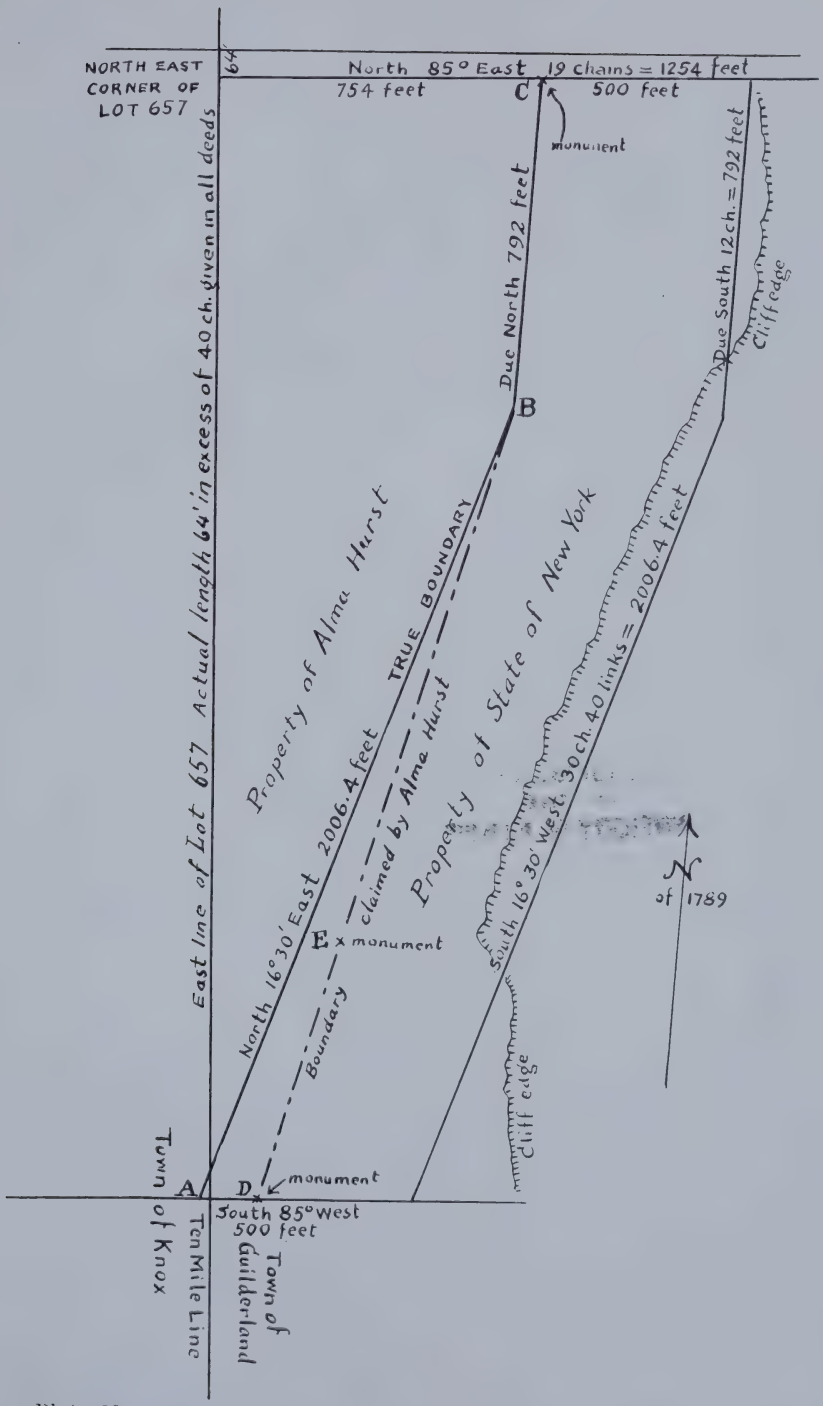


Plate 39

See page 109

MAP OF DISPUTED BOUNDARY IN JOHN BOYD THACHER PARK

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Plate 40

Montezuma Aqueduct From Above

See page 326

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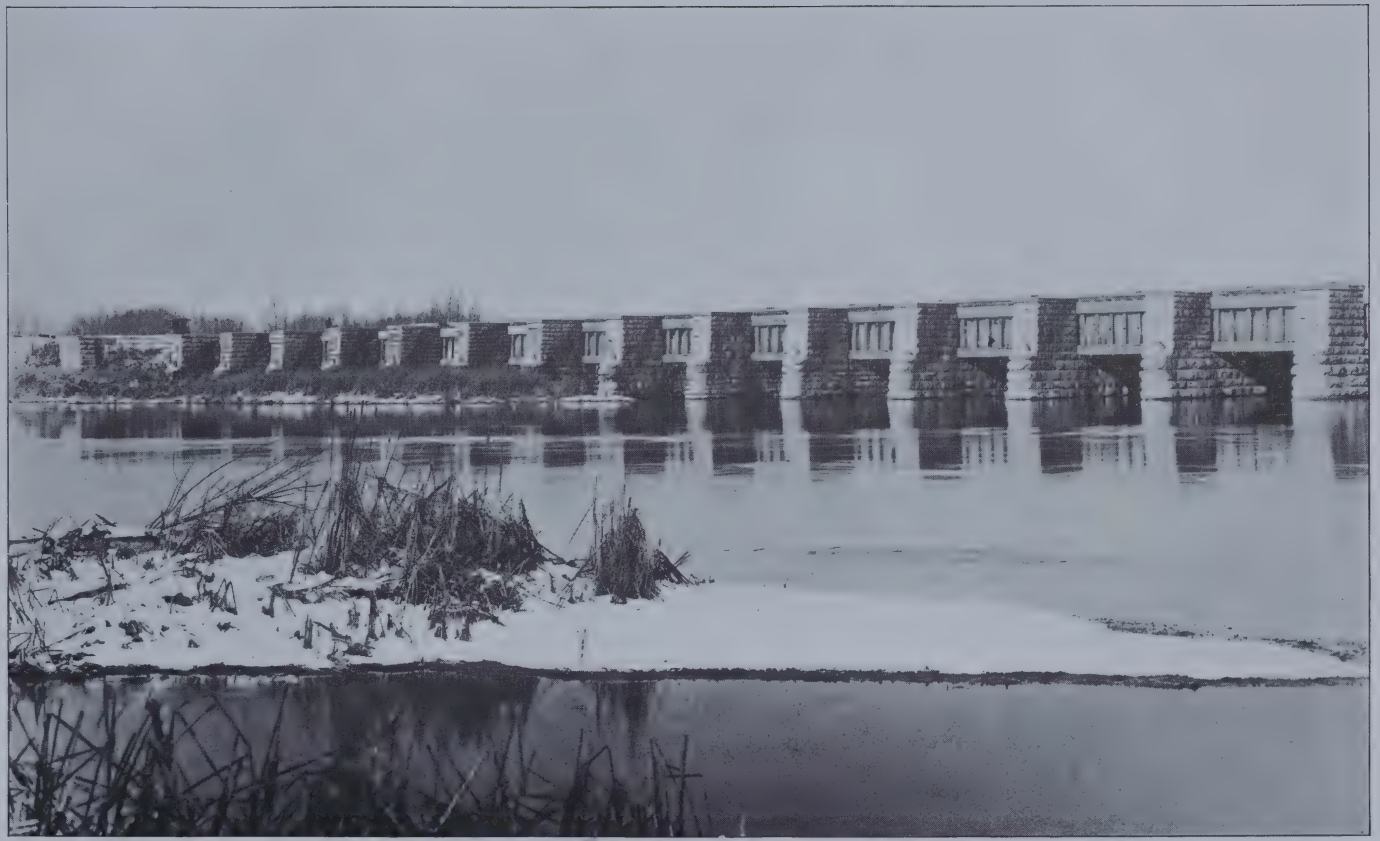

Plate 41

Montezuma Aqueduct From Below

See page 326

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Plate 42

See page 328

Algonquin Clay Vessel Found at Owasco Lake by E. H. Gohl

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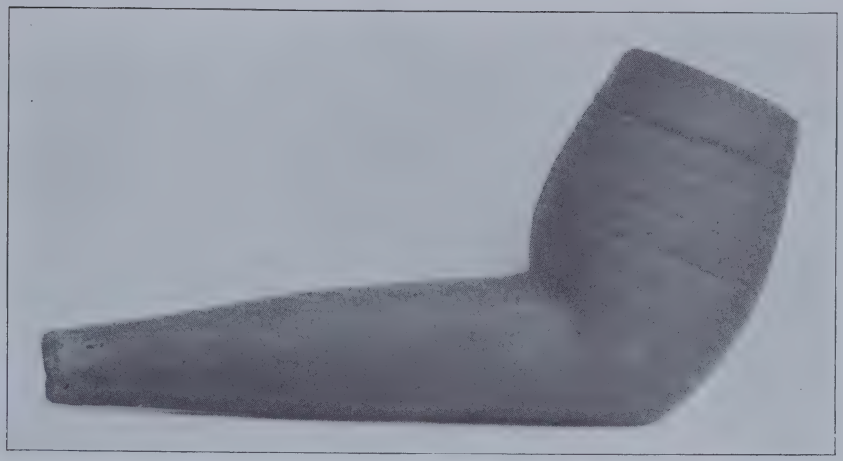

Algonquin Clay Pipe Found at Owasco Lake by E. H. Goihl

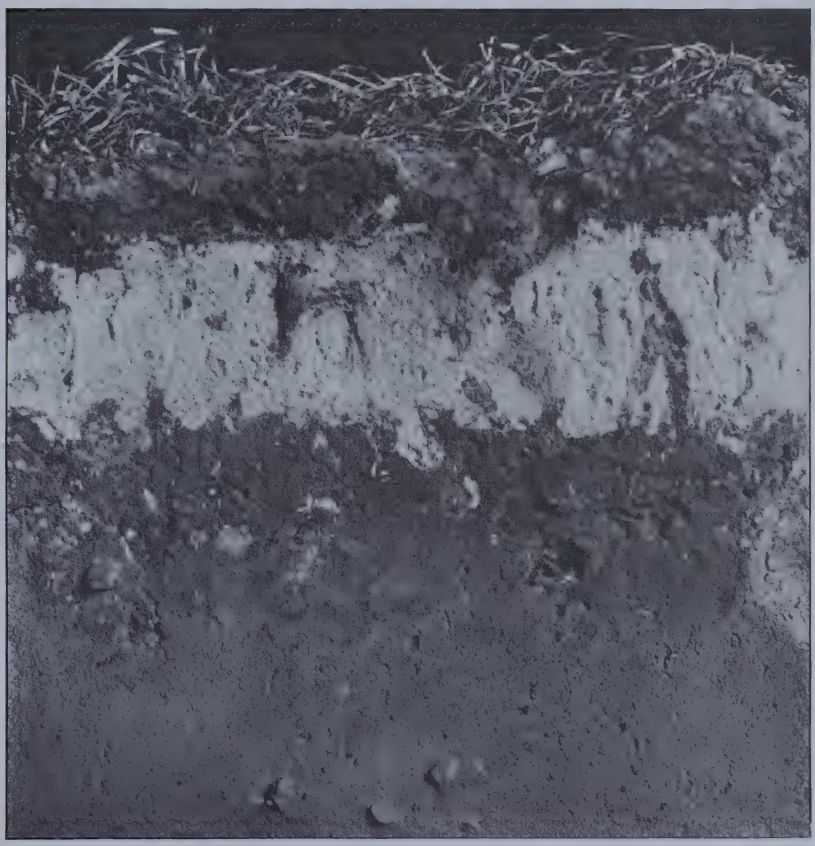

Plate 43 See page 328

Earth Section of Algonquin Fire-place Found at Owasco Lake
by E. H. Goihl
Light colored layer consists of wood ashes

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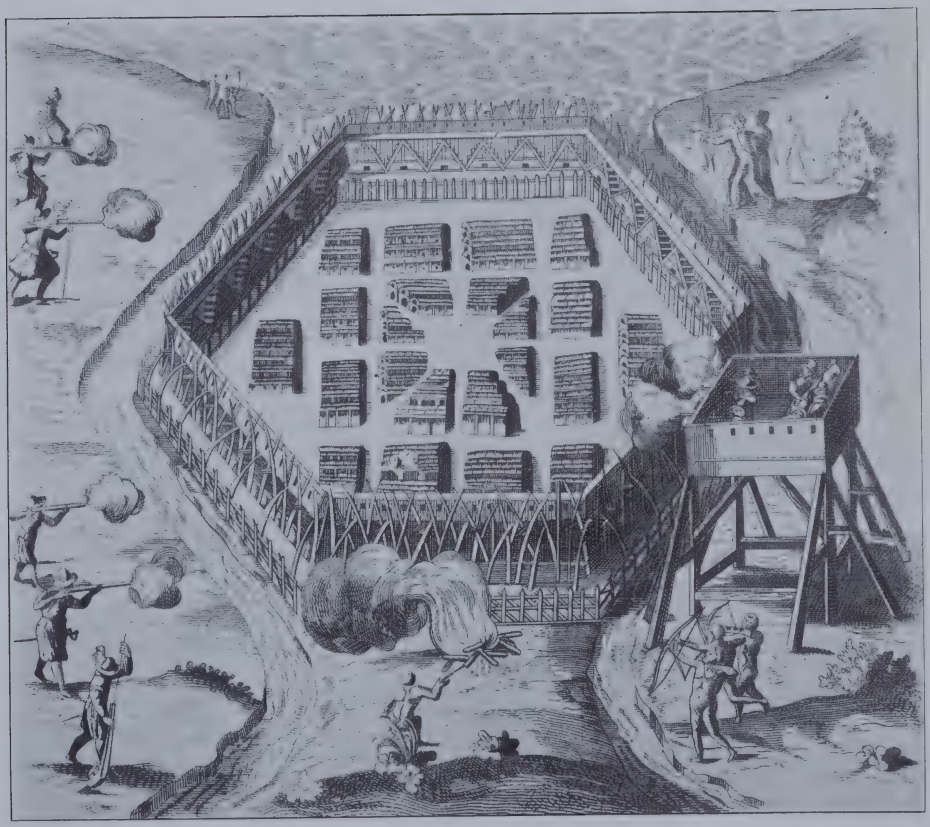

Plate 44

See page 639

CHAMPLAIN'S PLAN OF ONEIDA FORT, 1615

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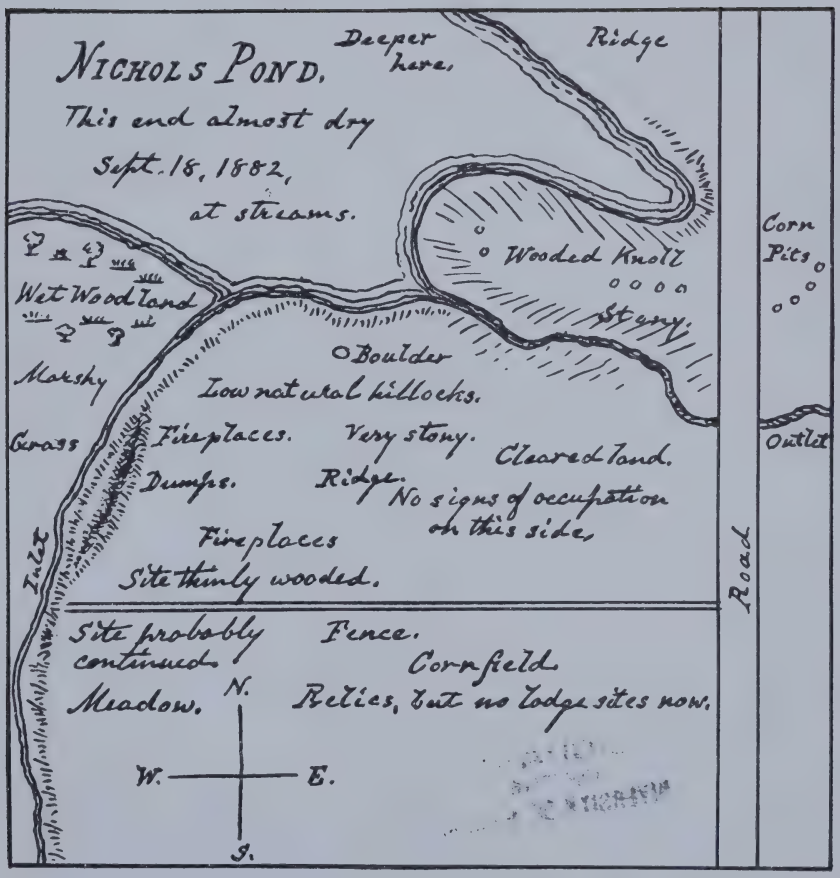


Plate 45

See page 641

W. M. Beauchamp's Plan of Oneida Fort Site at Nichols Pond

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Site of Champlain's Camp

Corn Pits

Oneida Stone

Plate 46

See page 641

ONEIDA FORT SITE AT NICHOLS POND

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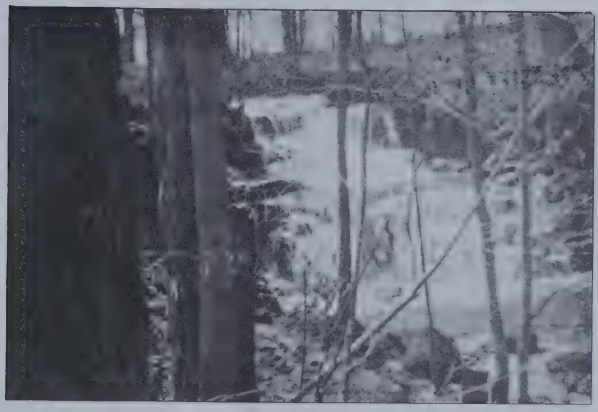
Outlet of Nichols Pond



Falls on Outlet

Falls on Outlet

Plate 47

See page 641

ONEIDA FORT SITE AT NICHOLS POND

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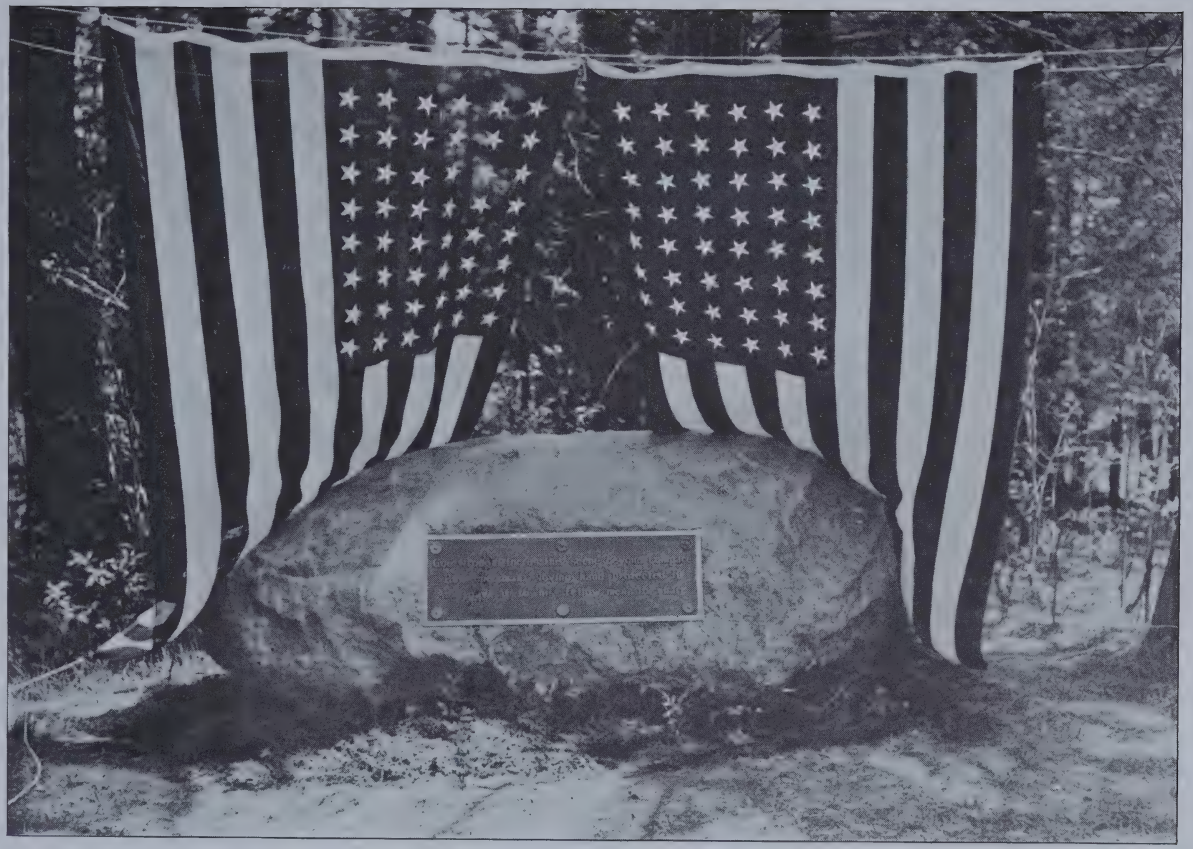

Plate 48

See page 88

LETCHWORTH PARK, N. Y.

Boulder and Tablet at Inspiration Point, Dedicated May 26, 1917

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Plate 49

See page 89

LETCHWORTH PARK, N. Y.

First New York Dragoons Monument, Moved to Park in October-November, 1917

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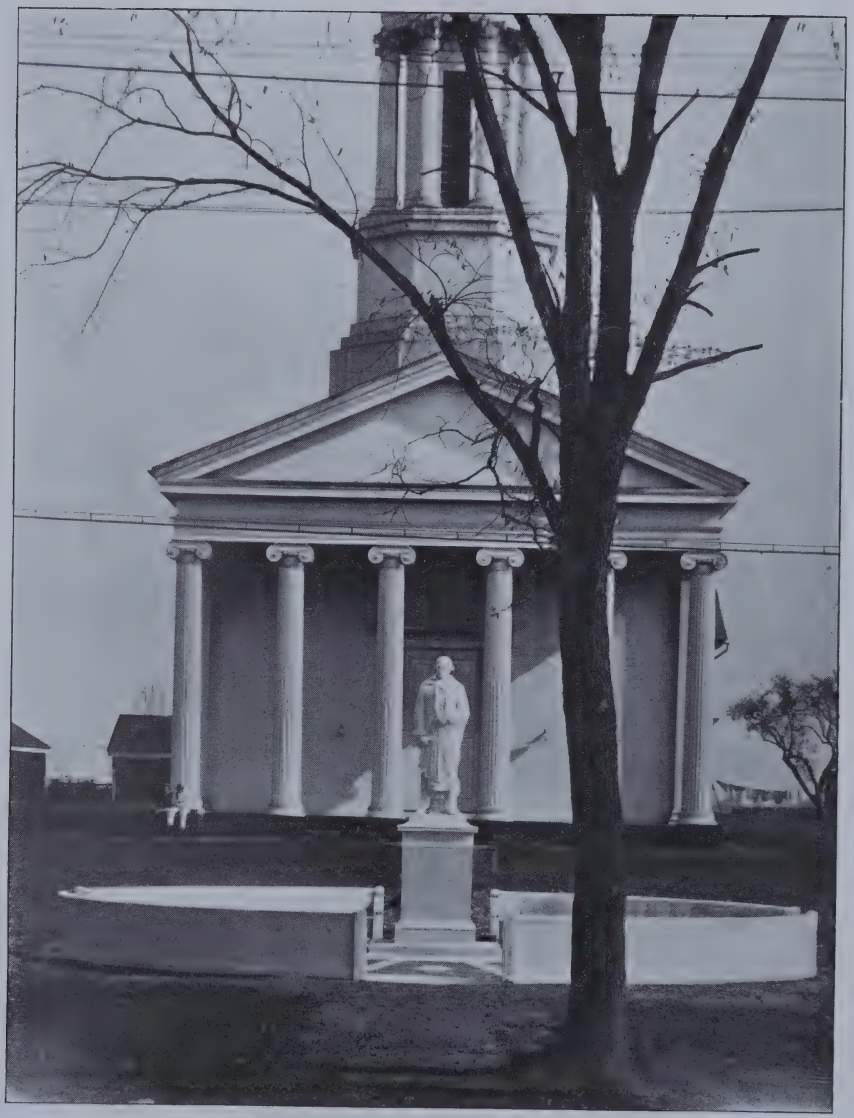

Plate 50

See page 350

ABBEY MEMORIAL, ENFIELD, CONN.

Front View

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OF THE
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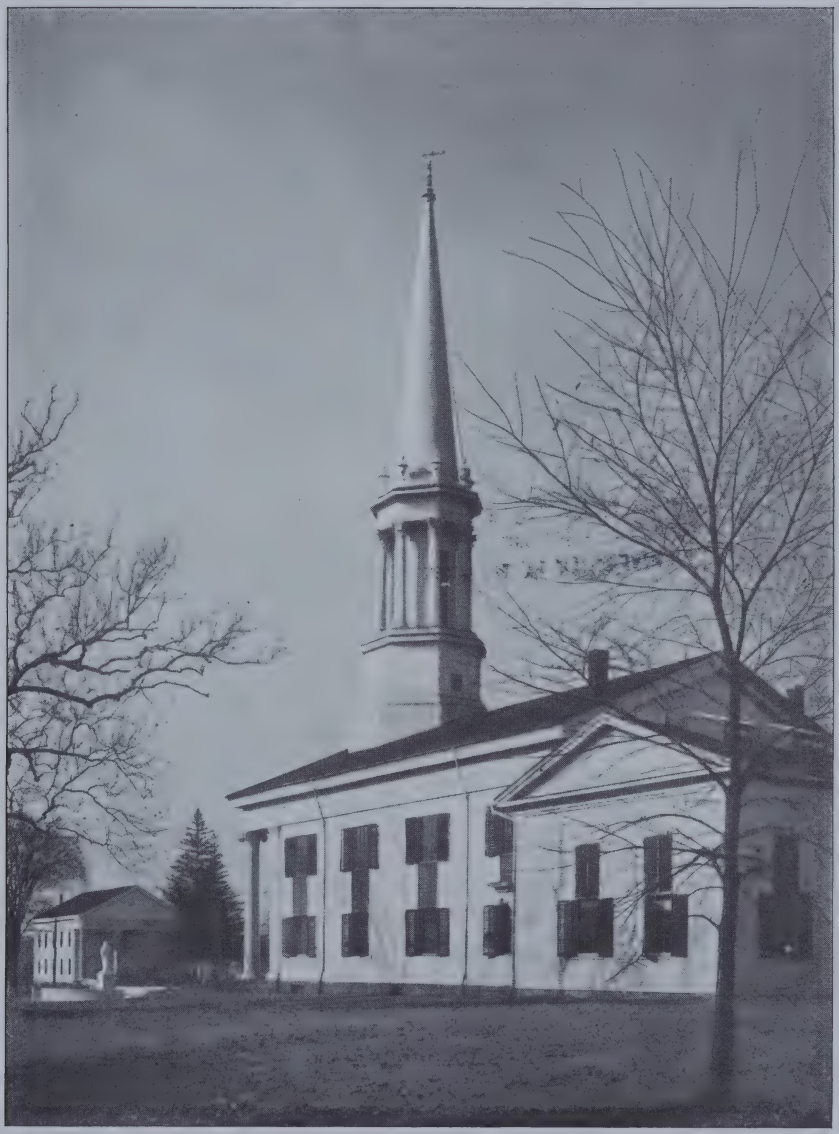

Plate 51

See page 350

Abbey Memorial, Enfield, Conn.

Old Church and Courthouse

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Plate 52

ABBEY MEMORIAL, ENFIELD, CONN.

View from Church Steeple

See page 350

LIBRARY
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Plate 53

See page 491

POCAHONTAS MEMORIAL WINDOWS, GRAVESEND, ENG.

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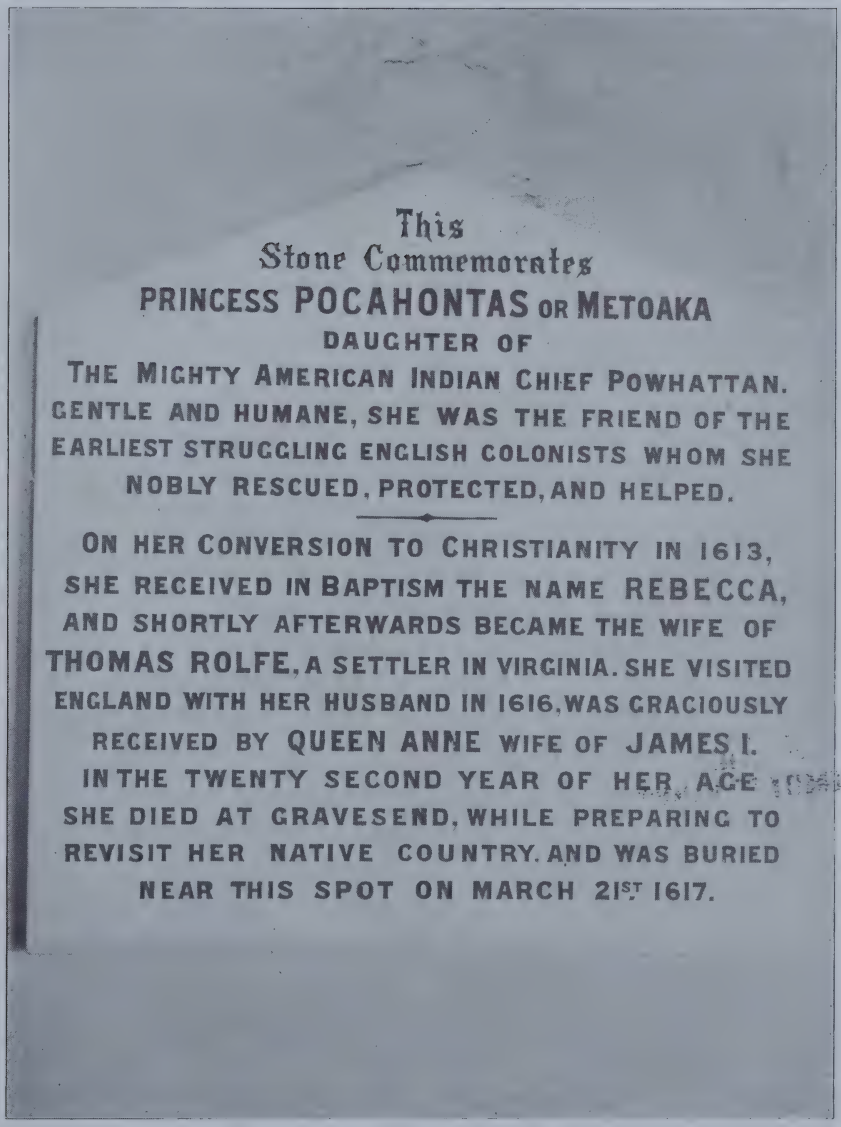
This
Stone Commemorates
PRINCESS POCAHONTAS OR METOAKA
DAUGHTER OF
THE MIGHTY AMERICAN INDIAN CHIEF POWHATTAN.
GENTLE AND HUMANE, SHE WAS THE FRIEND OF THE
EARLIEST STRUGGLING ENGLISH COLONISTS WHOM SHE
NOBLY RESCUED, PROTECTED, AND HELPED.
ON HER CONVERSION TO CHRISTIANITY IN 1613,
SHE RECEIVED IN BAPTISM THE NAME REBECCA,
AND SHORTLY AFTERWARDS BECAME THE WIFE OF
THOMAS ROLFE, A SETTLER IN VIRGINIA. SHE VISITED
ENGLAND WITH HER HUSBAND IN 1616, WAS GRACIOUSLY
RECEIVED BY QUEEN ANNE WIFE OF JAMES I.
IN THE TWENTY SECOND YEAR OF HER AGE
SHE DIED AT GRAVESEND, WHILE PREPARING TO
REVISIT HER NATIVE COUNTRY. AND WAS BURIED
NEAR THIS SPOT ON MARCH 21ST 1617.

Plate 54

See page 491

POCAHONTAS MEMORIAL STONE, GRAVESEND, ENG.

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Plate 55

FUNERAL OF TUSCANIA VICTIMS, ISLAND OF ISLAY, SCOTLAND

See page 474

LIBRARY
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Plate 56

See page 474

Graves of Tuscania Victims, Island of Islay, Scotland

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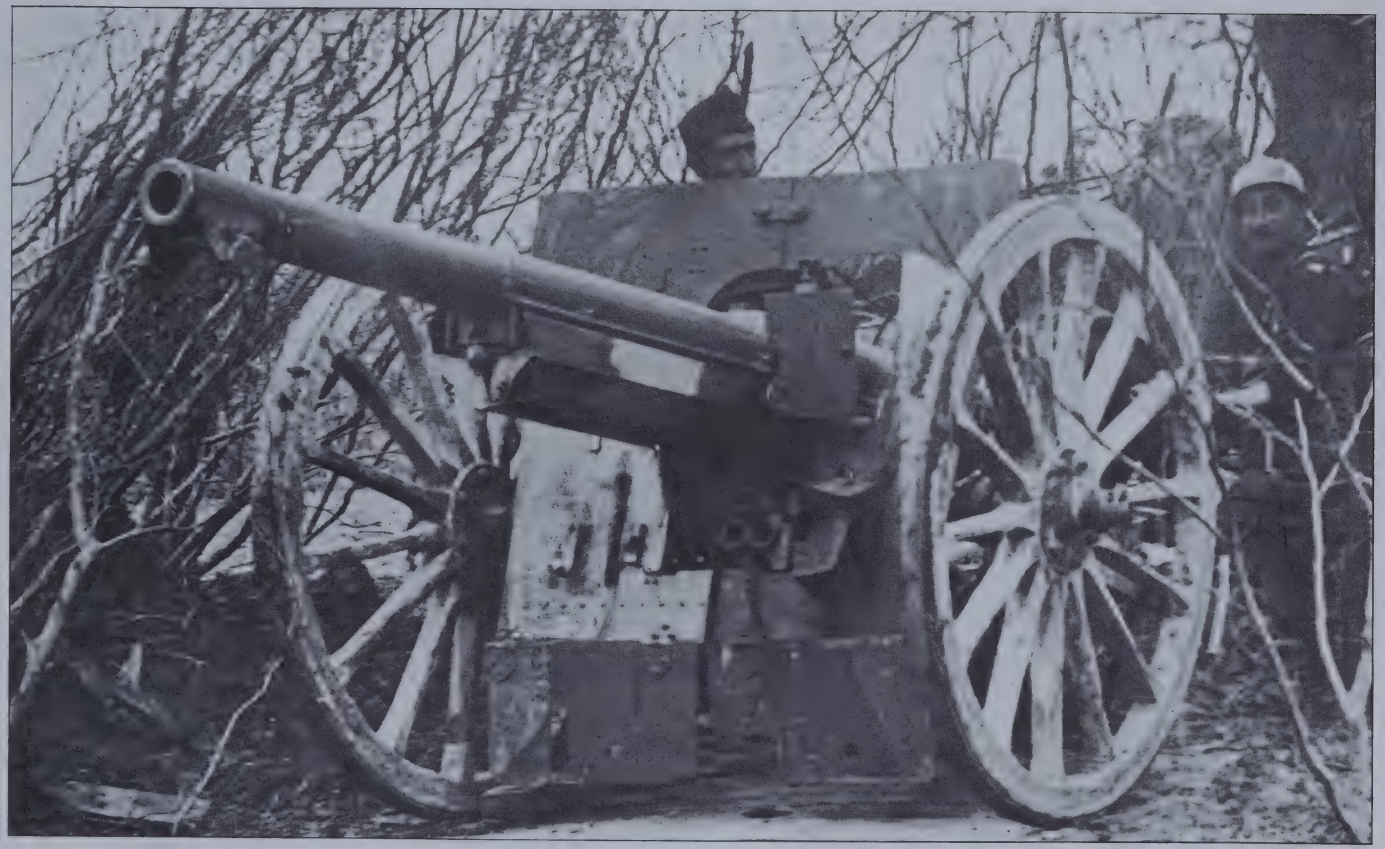

Plate 57

See page 493

A French 75-Millimetre Gun

Type of Gun that Fired First American Shot in France

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Plate 58

See page 469

Monument to First Three Americans Killed in France

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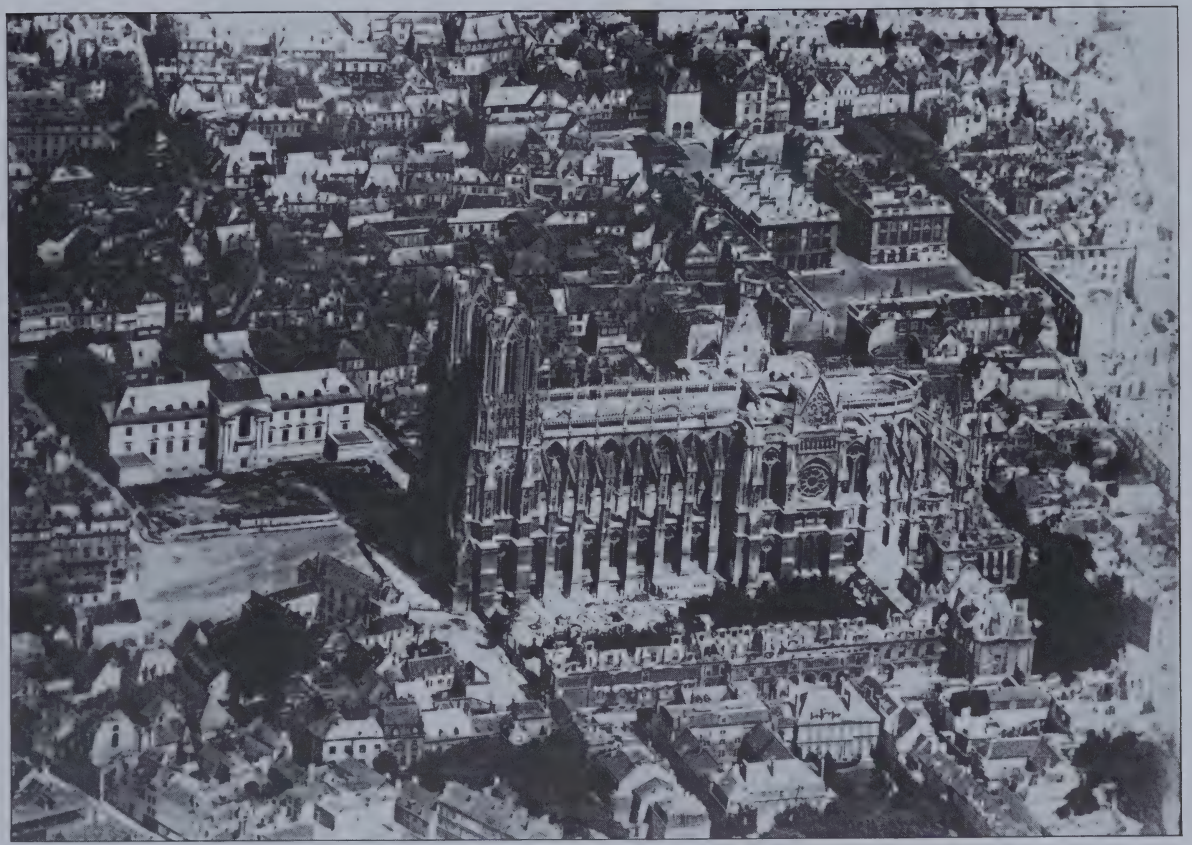

Plate 59

See page 497

AEROPLANE VIEW OF RHEIMS

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Plate 60

See page 493

HEAD OF THE GOLDEN VIRGIN

Specimen of German Vandalism at the Basilica in Albert, France

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UNIVERSITY OF

Plate 61

See page 493

MUTILATED CRUCIFIX AT REVIGNY

An Example of German Profanation of Sacred Things in France

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Plate 62

See page 537

On the West Battle-front in France

Funeral of a British Soldier

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Plate 63

See page 537

On the West Battle-front in France

Making Crosses for Soldiers' Graves

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Plate 64

See page 537

On the West Battle-front in France

Frenchmen Attending to French Graves

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Plate 65

See page 537

On the West Battle-front in France

WAACs Attending to British Graves

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Plate 66

See page 537

On the West Battle-front in France

British Soldiers' Graves on Hillside

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Plate 67

See page 537

On the West Battle-front in France

British Soldiers' Graves in Woods

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Plate 68

See page 537

On the West Battle-front in France

British Soldiers' Graves Adorned With Living Flowers

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Plate 69

See page 537

On the West Battle-front in France

Graves of Allies by Contalmaison Ruin

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OF THE
UNIVERSITY OF

Plate 70

See page 537

On the West Battle-front in France

German Shell Bursting Among Graves of Allies

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Plate 71

See page 508

ST. MARK'S, VENICE

Exterior Protected with Sandbags and Wooden Sheathing

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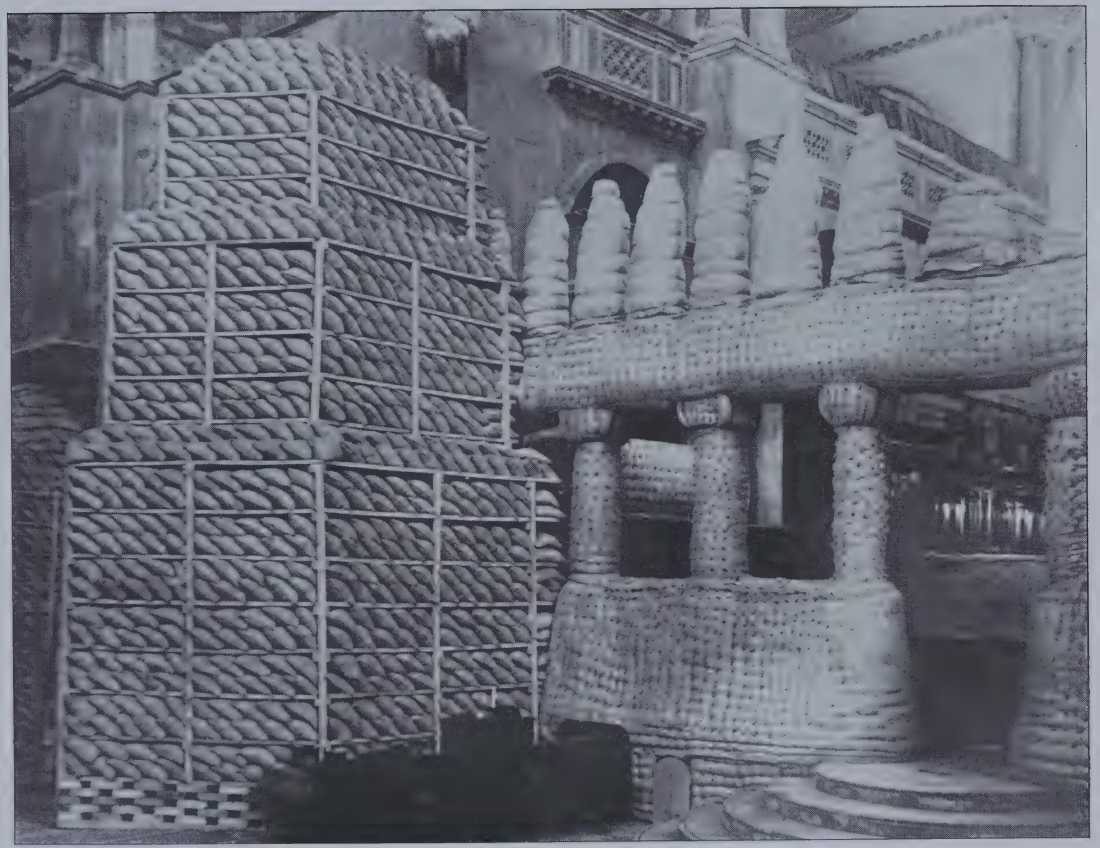

Plate 72

See page 508

St. Mark's, Venice

Sanctuary and Pulpit Protected with Sandbags and Quilting

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Plate 73

See page 508

St. Mark's, Venice

Removing the Famous Bronze Horses to a Place of Safety

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UNIVERSITY OF ILLINOIS

Plate 74

See page 508

PAOLA MONUMENT, VENICE

Protective Sandbags Hit by Bomb

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OF THE
UNIVERSITY OF ILLINOIS

Plate 75

See page 508

CHURCH OF ST. JOHN AND ST. PAUL, VENICE

Interior Protected with Sandbags and Heavy Quilting

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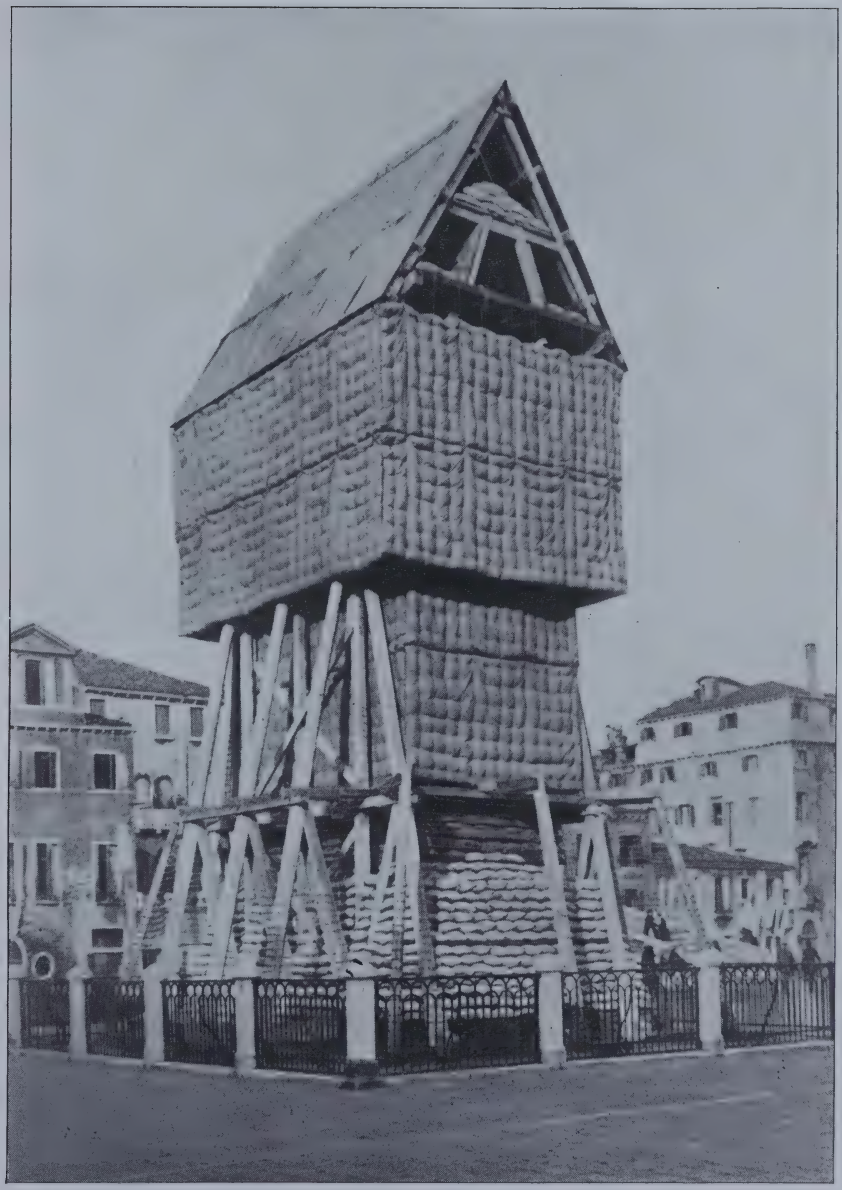

Plate 76

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Colleoni Statue, Venice, Protected

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Serbian Cemetery Near Trenches, East of Monastir

Plate 77

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